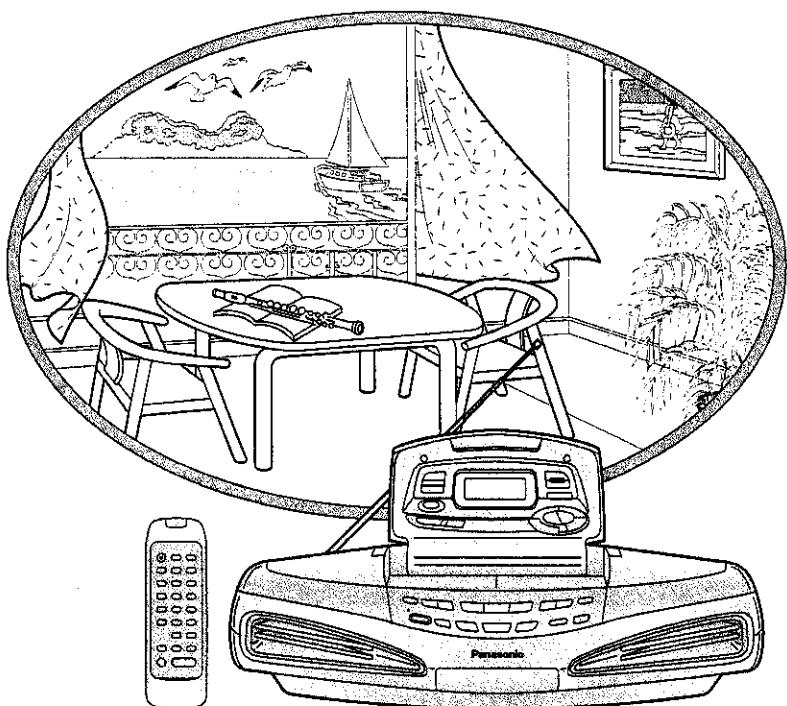


Portable Stereo CD System

RX-ED77

Operating Instructions



[EB] [GC] [GN]

RQT3628-3B

**COMPACT
DISC
DIGITAL AUDIO**

Panasonic®

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Printed in Japan

Model RX-ED77

Part No. RQT3628-3B

Ver. 1.0

01/95

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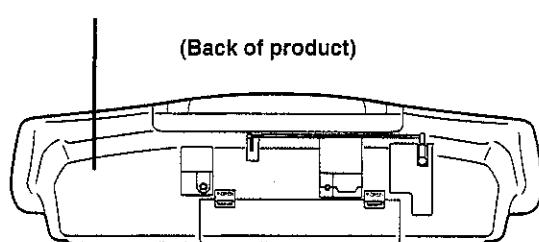
Ver. 1.0

01/95

Printed in Japan

Model RX-ED77

CLASS 1 LASER PRODUCT



DANGER	INVISIBLE LASER RADIATION WHEN OPEN. AVOID DIRECT EXPOSURE TO BEAM.
ADVARSEL	USYNLIG LASERSTRÅLING VED ÅBNING. HÅR SIKKERHEDSAFTRYDERE ER IBLID AF FUNKTION. UNDGÅ UDSETTELSE FOR STRÅLING.
VARO!	AVATTAMASSA JA SUJALURITUS OHITTETÄESSÄ OLET ALTTINA NÄYMMÄTÖNTÄ LASERSATEILILLE. ÄLÄ KATSO SÄTEESEN.
VARNING	OSYNLIG LASERSTRÄLLNING FÖR DENNA DEL AR ÖPPNAD OCH SPÄREN AR UTRÖPPAD. BETRAKTA EJ STRÄLEN.
ADVARSEL	USYNLIG LASERSTRÅLING NAR DEKSLEN ÅPNES OG SIKKERHEDSGLAS BRYTES. UNNGÅ EksPOSERING FOR STRÅLEN.
VORSICHT	UNSICHTBARE LASERSTRAHLUNG, WENN DAS GEÖFFNET WIRD. ABECKENDEGÖFFNETE NICHT DEM STRAHL AUSSETZEN.

(Inside of product)
(Indersiden af apparatet)
(Tuotteen sisällä)
(Apparatens insida)
(Produktets innsida)
(Im Inneren des Gerätes)

For areas except United Kingdom, Australia and New Zealand:

CAUTION:

The AC voltage is different according to the area.
Be sure to set the proper voltage in your area before use.
(For details, please refer to the page 5.)

CAUTION!

THIS PRODUCT UTILIZES A LASER.
USE OF CONTROLS OR ADJUSTMENTS OR PERFORMANCE OF PROCEDURES OTHER THAN THOSE SPECIFIED HEREIN MAY RESULT IN HAZARDOUS RADIATION EXPOSURE.
DO NOT OPEN COVERS AND DO NOT REPAIR YOURSELF. REFER SERVICING TO QUALIFIED PERSONNEL.

CAUTION!

DO NOT INSTALL OR PLACE THIS UNIT IN A BOOKCASE, BUILT IN CABINET OR IN ANOTHER CONFINED SPACE IN ORDER TO KEEP WELL VENTILATED CONDITION. ENSURE THAT CURTAINS AND ANY OTHER MATERIALS DO NOT OBSTRUCT THE VENTILATION CONDITION TO PREVENT RISK OF ELECTRIC SHOCK OR FIRE HAZARD DUE TO OVERHEATING.

WARNING:

TO REDUCE THE RISK OF FIRE, ELECTRIC SHOCK OR PRODUCT DAMAGE, DO NOT EXPOSE THIS APPLIANCE TO RAIN, SPLASHING, DRIPPING OR MOISTURE.

Dear customer

Thank you for purchasing this product.
For optimum performance and safety, please read these operating instructions carefully.

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Caution for AC Mains Lead

(For United Kingdom)

("EB" area code model only)

For your safety, please read the following text carefully.

This appliance is supplied with a moulded three pin mains plug for your safety and convenience.

A 5-ampere fuse is fitted in this plug.

Should the fuse need to be replaced please ensure that the replacement fuse has a rating of 5-ampere and that it is approved by ASTA or BSI to BS1362.

Check for the ASTA mark  or the BSI mark  on the body of the fuse.

If the plug contains a removable fuse cover you must ensure that it is refitted when the fuse is replaced.

If you lose the fuse cover the plug must not be used until a replacement cover is obtained.

A replacement fuse cover can be purchased from your local dealer.

CAUTION!

IF THE FITTED MOULDED PLUG IS UNSUITABLE FOR THE SOCKET OUTLET IN YOUR HOME THEN THE FUSE SHOULD BE REMOVED AND THE PLUG CUT OFF AND DISPOSED OF SAFELY.

THERE IS A DANGER OF SEVERE ELECTRICAL SHOCK IF THE CUT OFF PLUG IS INSERTED INTO ANY 13-AMPERE SOCKET.

If a new plug is to be fitted please observe the wiring code as shown below.

If in any doubt please consult a qualified electrician.

IMPORTANT

The wires in this mains lead are coloured in accordance with the following code:

Blue: Neutral, Brown: Live.

As these colours may not correspond with the coloured markings identifying the terminals in your plug, proceed as follows:

The wire which is coloured Blue must be connected to the terminal which is marked with the letter N or coloured Black or Blue.

The wire which is coloured Brown must be connected to the terminal which is marked with the letter L or coloured Brown or Red.

WARNING: DO NOT CONNECT EITHER WIRE TO THE EARTH TERMINAL WHICH IS MARKED WITH THE LETTER E, BY THE EARTH SYMBOL  OR COLOURED GREEN OR GREEN/YELLOW.

THIS PLUG IS NOT WATERPROOF—KEEP DRY.

Before use

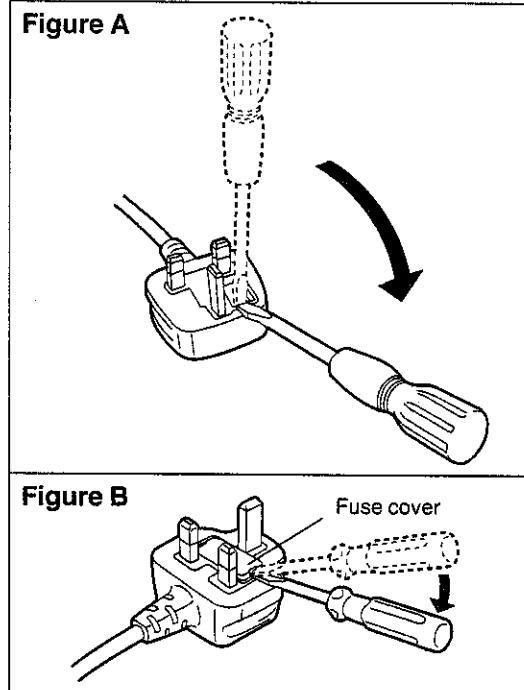
Remove the connector cover.

How to replace the fuse

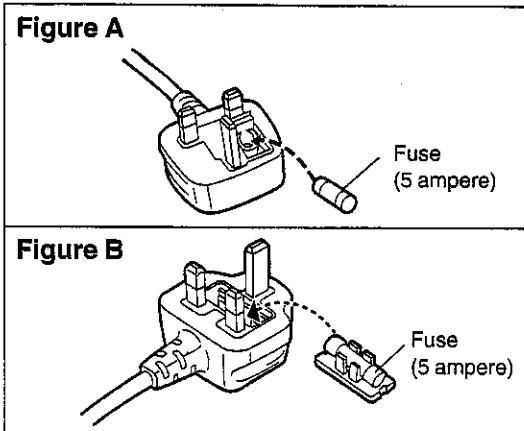
The location of the fuse differ according to the type of AC mains plug (figures A and B). Confirm the AC mains plug fitted and follow the instructions below.

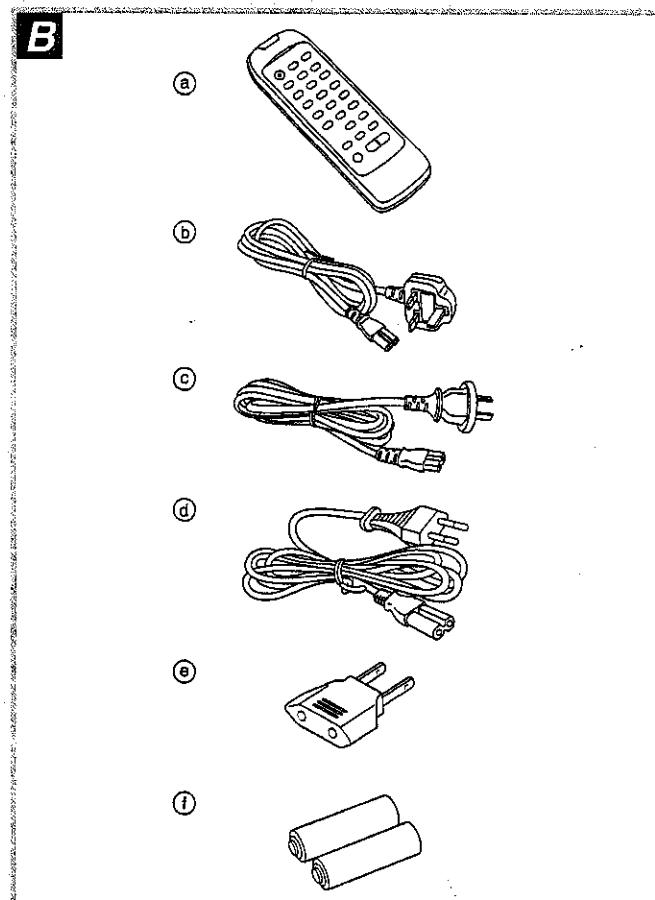
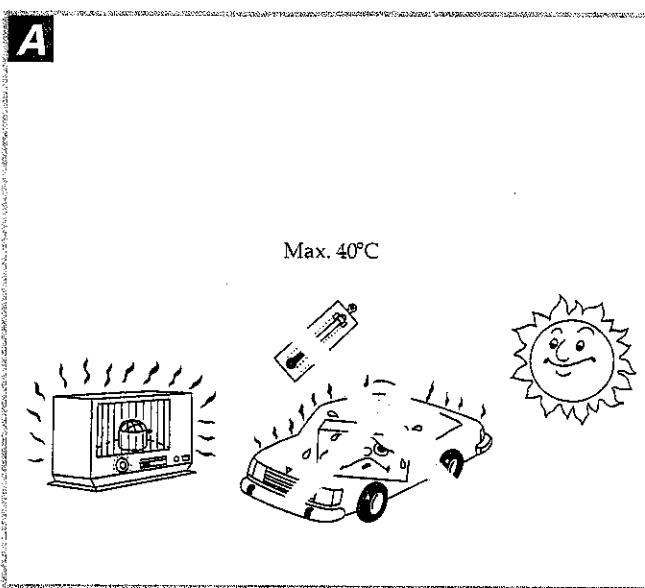
Illustrations may differ from actual AC mains plug.

1. Open the fuse cover with a screwdriver.



2. Replace the fuse and close or attach the fuse cover.



Precautions A

- If this unit is not used for a long period of time or is used only from an AC mains, remove all the batteries to prevent potential damage due to possible battery leakage.
- Avoid using or placing this unit near sources of heat. Do not leave it in an automobile exposed to direct sunlight for a long time with the doors and windows closed as this may deform the cabinet.
- Avoid cuts, scratches, or poor connections in the AC mains lead, as they may result in possible fire or electric shock hazard. Also, excessive bending, pulling or splicing of the cord should be avoided.
- Do not unplug the AC mains lead by pulling on the cord. To do so may cause premature failure or shock hazard.
- Do not operate this unit on AC mains in a bathroom, as a potential shock hazard may result.
- When not in use, disconnect the AC mains lead from the household AC outlet.

Use of batteries

- Do not use rechargeable type batteries.
- Do not mix old and new batteries, or batteries of the different types (manganese and alkaline, etc.).
- Always remove old, weak or worn-out batteries promptly and dispose of them properly.
- Never subject batteries to excessive heat or flame; do not attempt to disassemble them, and be sure they are not short-circuited.
- If this unit is not to be used for a long period of time or is used only from an AC power source, remove the batteries and store them in a cool, dark place.
- If a battery leaks, remove all batteries and dispose them properly.
- Thoroughly clean the battery compartment before inserting new batteries.
- If the electrolyte comes into contact with skin or clothes, flush with water immediately.
- Keep batteries out of reach of children.
- Do not attempt to recharge alkaline or manganese batteries.
- Batteries installed with incorrect polarities may leak and damage the unit.

In these operating instructions, "unit off" defined as the following mode.

"Standby" when AC power is used.

"Battery power off" when batteries are used.

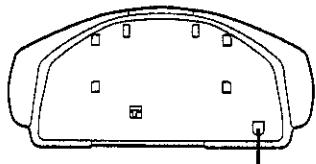
Supplied Accessories

Please Check and identify the supplied accessories. **B**

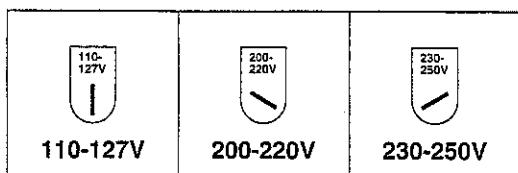
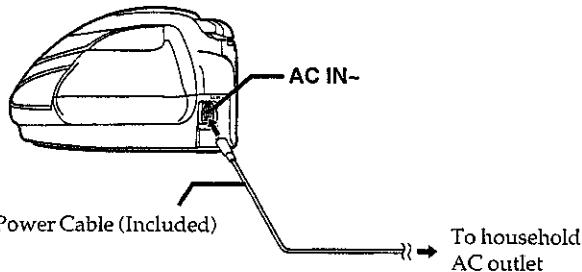
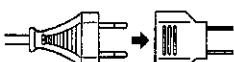
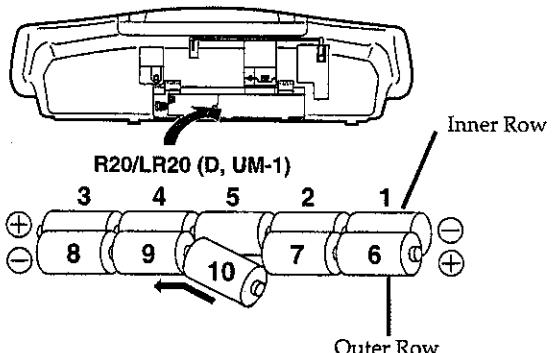
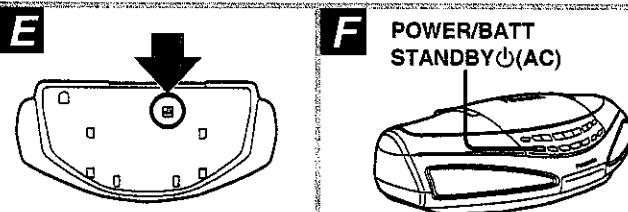
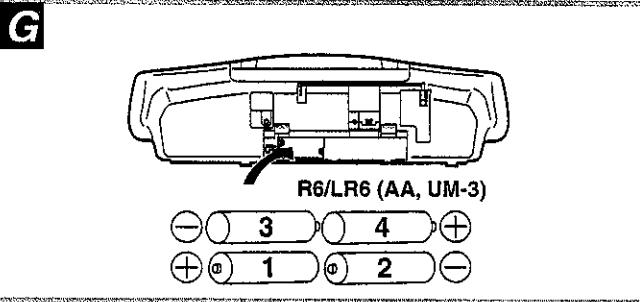
(a)	Remote control transmitter (EUR643826)	1pc.
(b)	AC power cord	1pc.
(c)	For United Kingdom: (RJA0038-U)	1pc.
(d)	For Australia and New Zealand: (RJA0035-A)	1pc.
(e)	For areas except for United Kingdom, Australia and New Zealand: (RJA0019-1U)	1pc.
(f)	AC plug adaptor (Except for United Kingdom, Australia and New Zealand)	1pc.
(g)	Batteries for remote control (Except for United Kingdom, Australia and New Zealand)	2pcs.

Use numbers indicated in parentheses when asking replacement parts.

Power Sources

A

VOLTAGE SELECTOR

**B****C****D****E****F**

Operating unit on AC power

For areas except United Kingdom, Australia and New Zealand:

Set the voltage. Use a flat-head screwdriver to turn the voltage selector on the rear to the voltage setting for the area in which you will be using the system. **A**

Connect the included AC power cable to the AC IN socket of the unit and your household AC outlet. **B**

If the power plug will not fit your socket, use the power plug adaptor (included) as illustrated. **C**

Operating unit on battery power (Not included)

Install memory batteries first.

Battery installation and removal **D**

Place unit on a soft cloth when installing and removing batteries to avoid damaging the front panel.

- ① Open the battery cover on the rear panel.
- ② Install batteries in the order indicated in the diagram.

Remove batteries by inserting finger into hole on the bottom of the unit and pushing out. **E**

Battery life **F**

When the power/battery check/standby indicator goes off (or dims) during play, replace all the batteries with new ones.

Memory batteries (Not included)

What is memory?

Memory is the information which can be programmed into the unit such as:

- Time
- Timer programming
- CD programming
- Radio stations

If memory batteries are not used, the memory is cancelled at the following times.

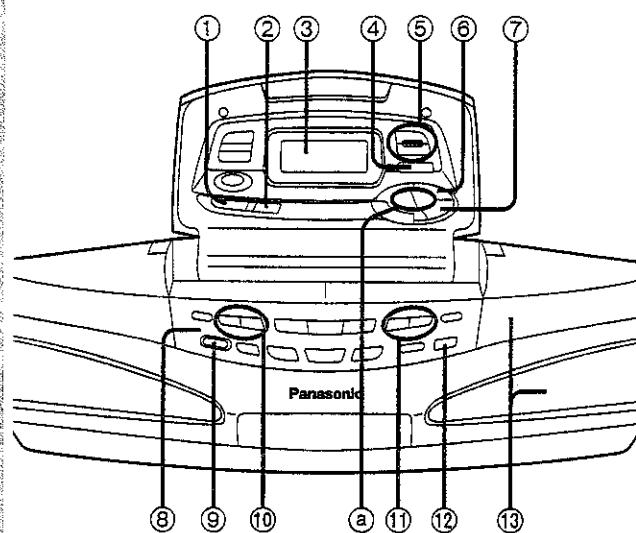
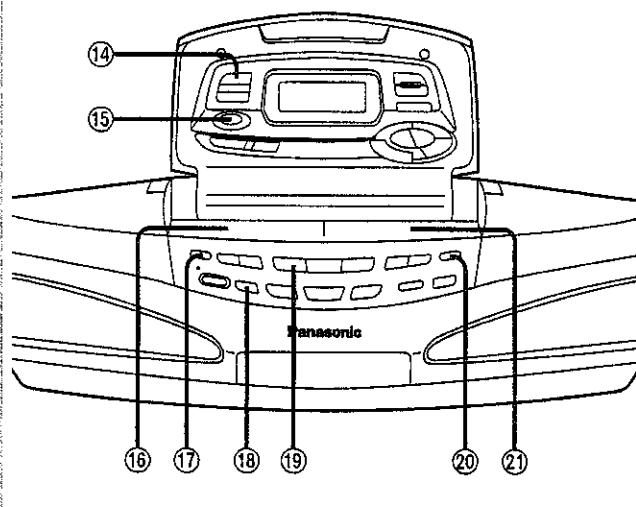
- In electric failures
- When the cable plug is removed from the AC outlet
- When, using batteries as the power source, cable is inserted into the unit while disconnected from the AC outlet

Battery installation and removal **G**

Press the negative end of the number 4 battery to remove batteries.

Replacing batteries

- The service life of these batteries is approximately one year.
- To preserve the memory contents, connect the power cable to the household AC outlet before replacing all the memory batteries with new ones.
- When disconnecting the power cable, first turn the unit off by pressing POWER.
- The service life of the memory back-up batteries is reduced if the power cable is disconnected from the household AC outlet with the power still supplied.

A**B**

Location of Controls

Basic controls

Number	Designation	Reference Page
①	Sound virtualizer button (S.VIRTUALIZER)	17
②	Preset equalizer button (PRESET EQ)	17
③	Display panel	
④	Recording timer programming button (REC TIMER)	26
⑤	Play timer programming button (PLAY TIMER A, B)	24
⑥	Timer time adjustment button (TIMER ADJUST)	24, 26
⑦	Clock time adjustment button (CLOCK ADJUST)	9
⑧	Power/battery life check/standby indicator [POWER/BATT, STANDBY (AC)]	5
	The indicator lights green when the unit is turned on. When the AC power supply is used, it functions as an AC connection indicator. (The indicator colour changes to red when the unit is turned off.)	
	When the unit is operated on batteries, it functions as a battery check indicator. (See page 5.)	
⑨	Power "STANDBY" switch [POWER/BATT, STAND BY (AC)]	
⑩	Volume control buttons (VOLUME +, -)	
⑪	Top panel open/close buttons (TOP PANEL OPEN ▲, CLOSE ▼)	8
⑫	Remote control signal sensor (SENSOR)	8
⑬	Speaker	

Button ⑩ (−/◀◀, +/▶▶) functions change according to the operation mode when pressed.

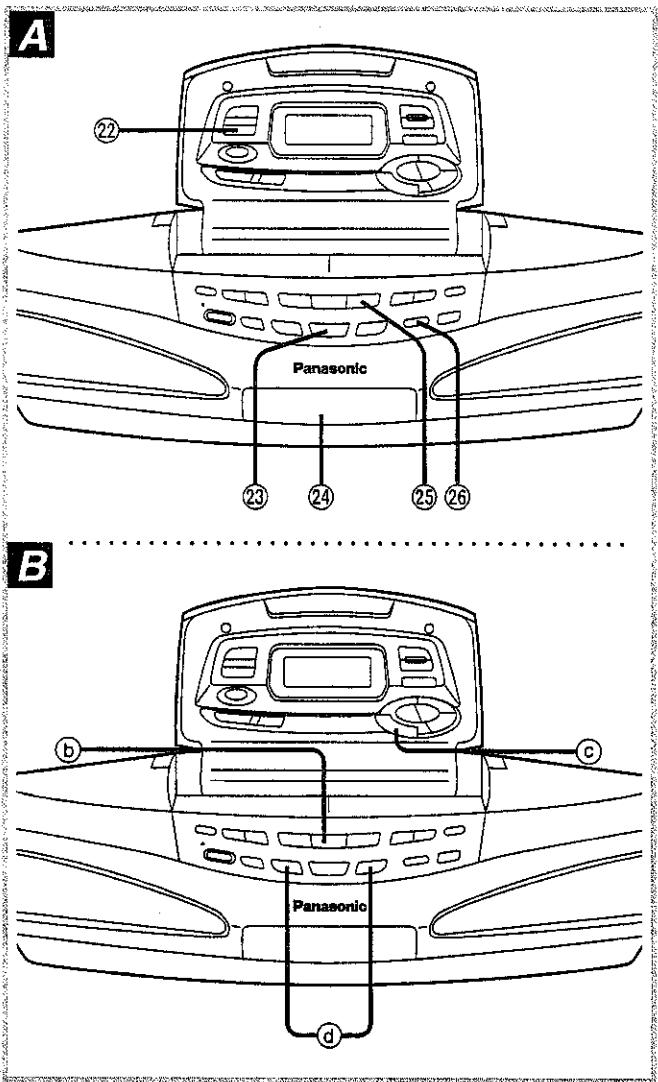
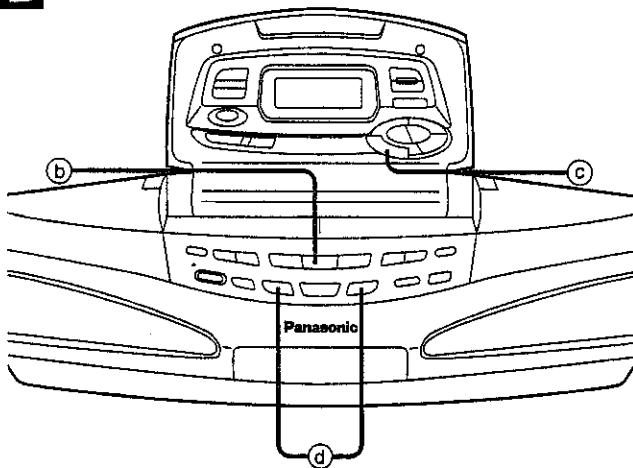
Mode	Function	Page
Time adjustment	Setting time	9
Radio	Selecting station	12
CD	Selecting tracks for programming	16

Cassette deck controls

Number	Designation	Reference Page
⑭	Tape edit button (TAPE EDIT)	23
⑮	Record/record pause button (●/● II REC/REC PAUSE)	19–23
⑯	Deck 1	
⑰	Deck 1 eject button (▲ DECK 1)	
⑱	Deck 1/2 select button (DECK 1/2)	10
⑲	Cassette play/direction button (◀▶ PLAY/DIR)	10
⑳	Deck 2 eject button (▲ DECK 2)	10
㉑	Deck 2	

Location of Controls

Tuner/CD controls A

**B**

Number	Designation	Reference Page
--------	-------------	----------------

- ②2 CD recording mode button (CD REC MODE) ... 21, 22
- ②3 Band button (BAND) 12
- ②4 CD tray 14
- ②5 CD play/pause button (▶/■ PLAY/PAUSE) 14
- ②6 ▲ CD tray open/close button
(▲ CD OPEN/CLOSE) 14

B

Button **b** (■ STOP) functions change according to the operation mode when pressed.

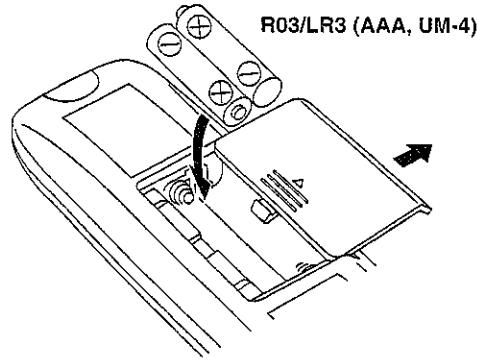
Mode	Function	Page
Tape play/ CD play	Stop play	10 14
Tape stop/ CD stop	Selects between CD and cassette (each time it's pressed)	10 14

Button **c** (•MEMORY/- CLEAR) functions change according to the way the buttons are pressed.

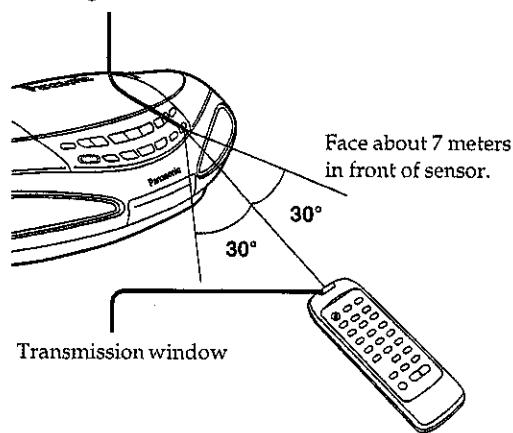
Press	Function	Page
Once	Program	16
Continuously	Cancel programming	16

Button **d** (▼/◀ REW [TPS]/CD, ▲/▶ FF [TPS]/CD) functions change according to the operation mode when pressed.

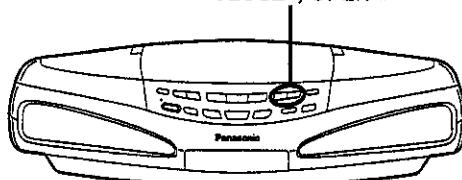
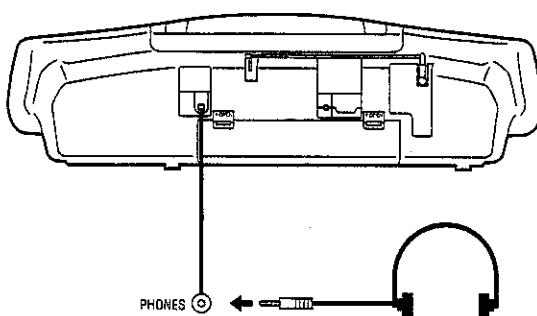
Mode	Function	Page
Tape stop	Fast forward, rewind	11
Tape play	Return to the beginning of the track	11
Radio	Select preset station	13
CD stop	Select track	14
CD play	Skip track, fast forward, rewind	14

A**B**

Remote control signal sensor (SENSOR)

**C**

CLOSE▼, OPEN▲

**D**

Concerning the Remote Control

Battery installation and removal

A

Remove the batteries (included for areas except United Kingdom, Australia and New Zealand) by pulling the positive side of the battery up.

Battery life

The battery life is about one year.

Although the battery life varies depending on how often the device is used, the batteries should be replaced about once every year on the average.

The batteries should be replaced if commands from the remote control transmitter do not operate the unit even when transmitter is held close to the front panel.

Correct method of use

B

Operation caution

- Do not expose the remote control signal sensor to direct sunlight or bright fluorescent lighting.
- Keep the remote control signal sensor and end of the remote control free from dust.

Opening/Closing the Top Panel

Press TOP PANEL OPEN ▲ to open panel.
Press TOP PANEL CLOSE ▼ to close the panel.

When this unit operated on battery power, the panel cannot be opened or closed by pressing OPEN or CLOSE on the remote control in the unit off mode. Turn the unit on first by pressing POWER on the main unit before opening or closing the panel.

Do not put any object on the top panel to prevent it would fail inside the unit. It might be cause of fire or trouble.

Using Headphones

D

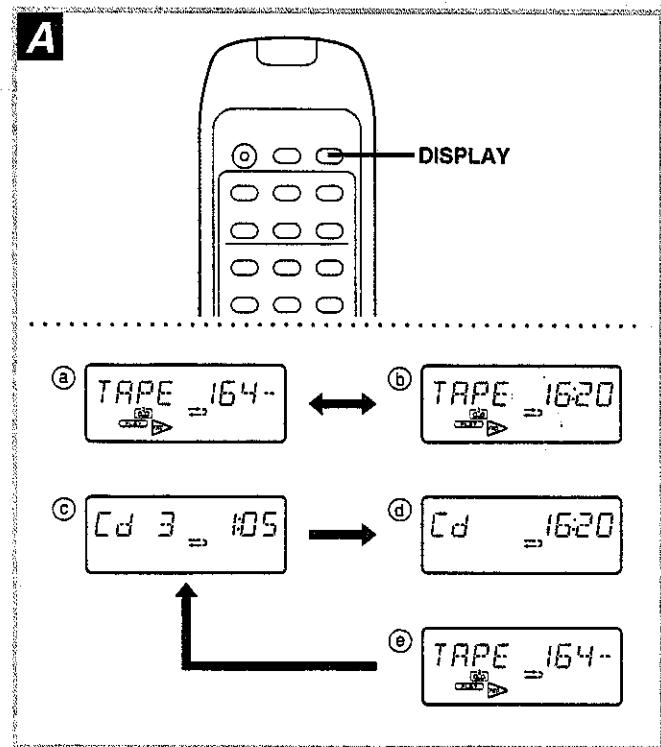
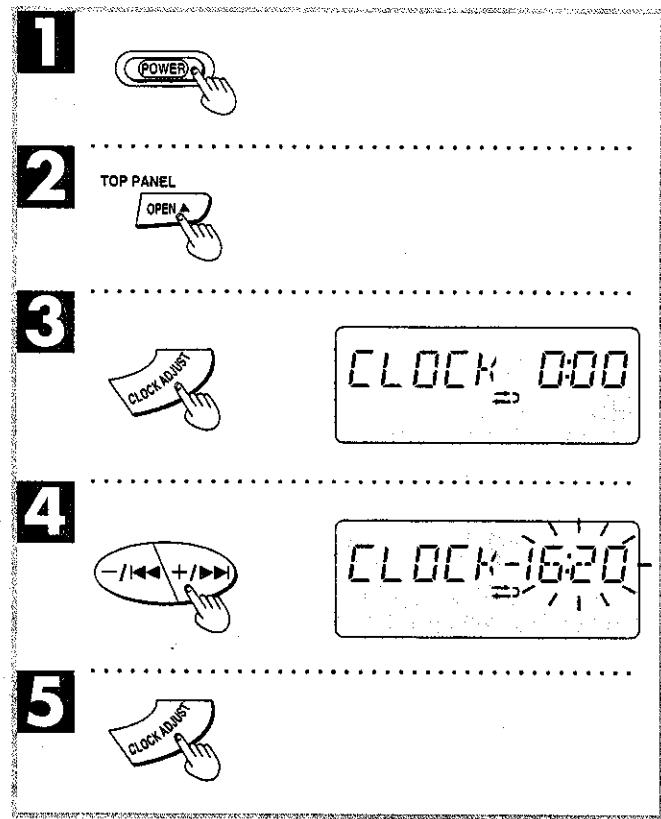
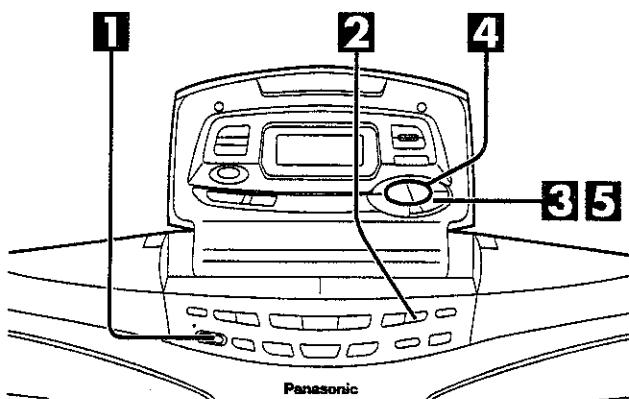
Lower the volume and connect the headphones (not included).

Plug type: 3.5 mm stereo

Note

Avoid listening for prolonged periods of time to prevent hearing damage.

Setting the Clock



The clock has a 24-hour display.
Example: Setting the clock to 16:20;

- 1** Press POWER.
(This turns the unit on.)
- 2** Press TOP PANEL OPEN ▲ to open top panel.
- 3** Press CLOCK ADJUST.
"CLOCK" is displayed.
- 4** Press +/▶▶ or -/◀◀ to show desired time.
The time display can be changed in one minute units by tapping the buttons, and quickly by holding down the buttons.
- 5** While the time display is flashing;
Press CLOCK ADJUST.
The clock now starts operating, and the display returns to its original status.

To display the clock (When the unit is on): **A**
(Available only from the remote control)

Press DISPLAY when the unit is on.

Selecting the Display **A**

(Only from the remote control)

Press DISPLAY when the unit is on.

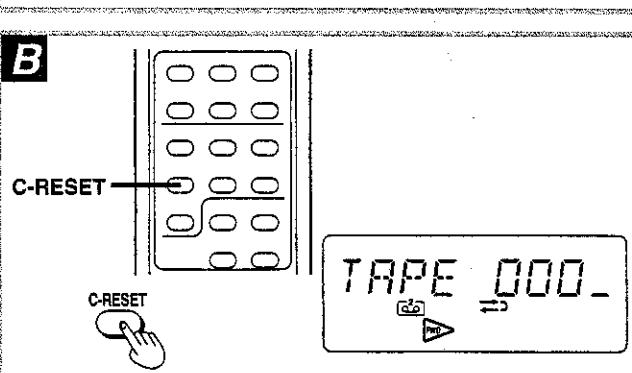
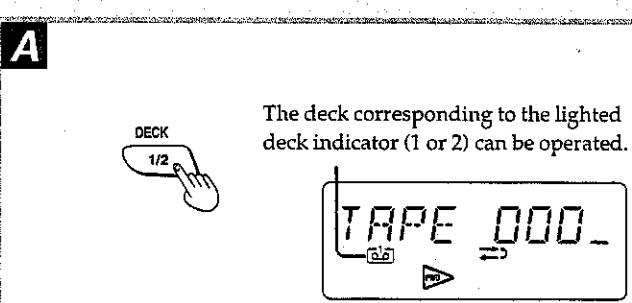
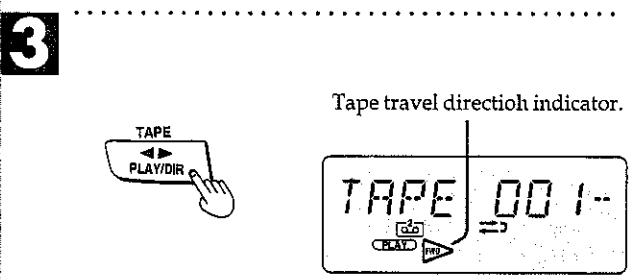
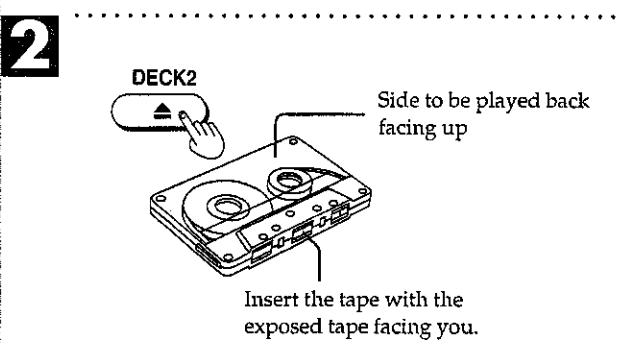
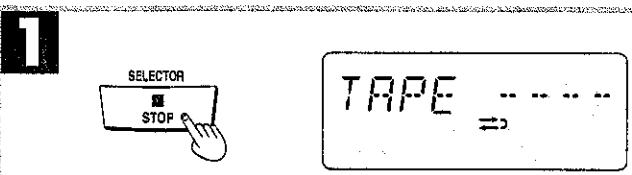
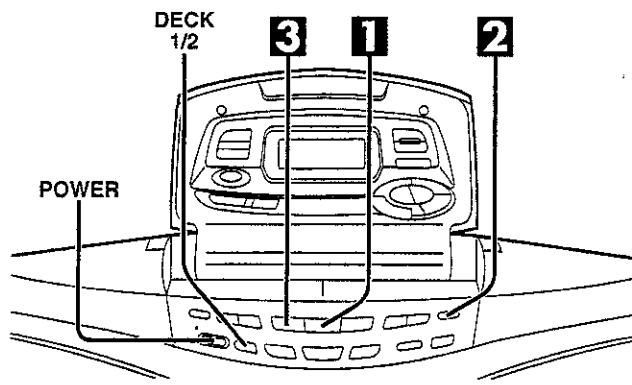
The display changes each time the button is pressed.

- When using the cassette
 - (a) Tape counter
 - (b) Present time
- When using the radio or CD
 - (c) Frequency/play status
 - (d) Present time
 - (e) Tape counter

"—" appears on the tape counter display when a cassette has not been inserted.

Listening to Cassettes

Listening



Tapes can be played back either deck 1 or deck 2. Normal, high position and metal tapes can be used.

Press POWER.

(Only when the batteries are used for the power supply)

1 Press ■ STOP to select the cassette mode.
CD → TAPE
(The display changes each time the button is pressed.)

2 Press DECK 1 ▲ or DECK 2 ▲, load the tape and close the lid.
The direction is automatically set to play the top side (▷ is displayed).

3 Press ◀ ▷.
"FWD" is displayed and play begins. ("REV" is displayed when play begins while ◀ is displayed.)
▷: The side which is facing up is played back.
◀: The reverse side is playback.

To stop play:

Press ■.

To listen to the other side of the tape:

Press ◀ ▷ during playback.

Hint

Pressing ◀ ▷ automatically turns the unit on, and if a tape is inserted, begins play (only when AC power is supplied).

Changing the operation deck

The deck loaded last is automatically selected.

Press DECK 1/2 to select deck 1 or 2. ▲

Note

- When one deck is fast forwarding or rewinding and the other is selected and play begun by pressing ◀ ▷, fast forwarding or rewinding stops.
- When one deck is playing and the other is selected and ▲ ▶▶ or ▼◀ pressed, play stops.

To reset the tape counter to "000"

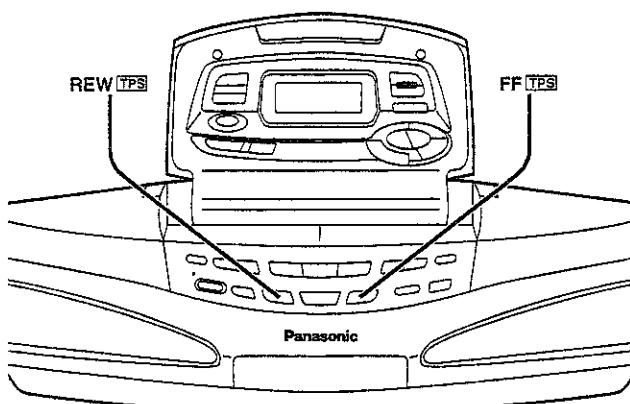
(Available only from the remote control)

Press C-RESET. □

Types of tapes which can be played on this unit:

The unit automatically identifies type of tape.

Normal position/TYPE I	<input type="radio"/>
High position/TYPE II	<input type="radio"/>
Metal position/TYPE IV	<input type="radio"/>

**Fast forwarding and rewinding a cassette**

Press FF [TPS] or REW [TPS] when cassette is in stop mode.

	Rewind	Fast forward
Main unit	v / ↲	↖ / ▶▶
Remote control	REW [TPS]	FF [TPS]

**Finding the beginning of a track
(TPS: Tape Program Sensor) ④**

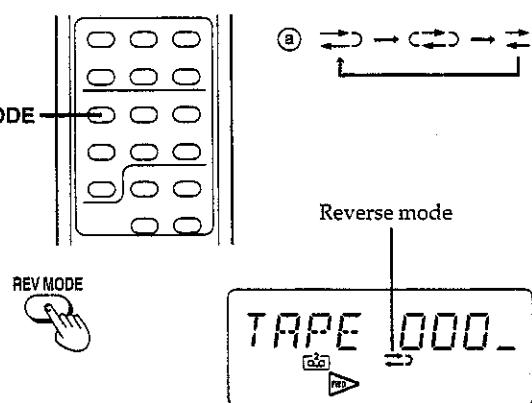
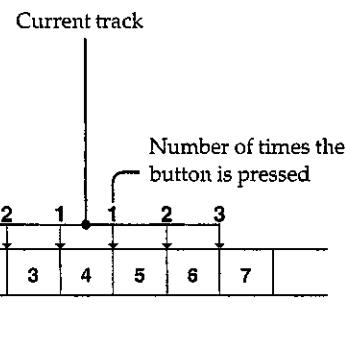
Press the button once for each track to be skipped (up to 9 tracks).

Press during play mode.

	Backward	Forward
Main unit	v / ↲	↖ / ▶▶
Remote control	REW [TPS]	FF [TPS]

Notes

- Since the blank spaces between tracks are used for locating the beginning of each track, the TPS function may not operate in the following cases:
 - When the blank spaces are 4 seconds or less.
 - When there are no blank spaces on the tape (such as when the recording has been made from a microphone, etc.).
 - When there are parts of a track which have been recorded at a particularly low level or which have not been recorded at all (such as with classical music).
 - When 10 or fewer seconds until elapsed since the beginning of a track or when there are 10 or fewer seconds until beginning of the next track.
 - When a tape is recorded with fade-ins or fade-outs.
- When you press ↲ ▶ to start playback on one deck during fast forwarding or rewinding on another deck, fast forwarding or rewinding will be stopped.

**Selecting the reverse mode**

(Available only from the remote control)

Press REV MODE to select the mode. ⑤

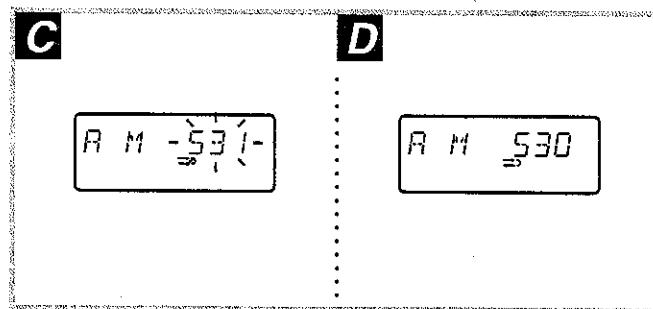
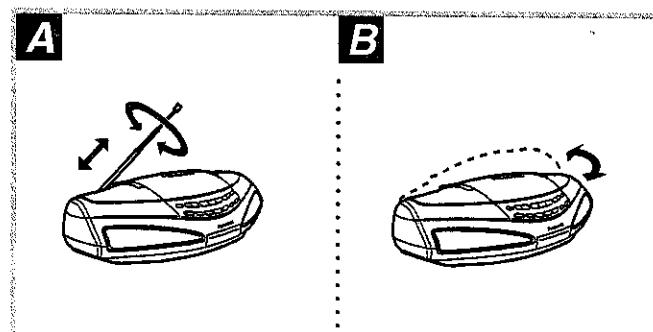
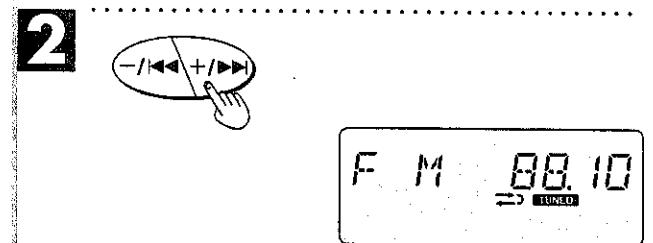
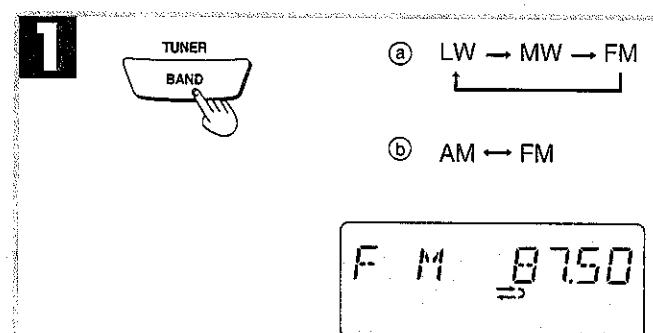
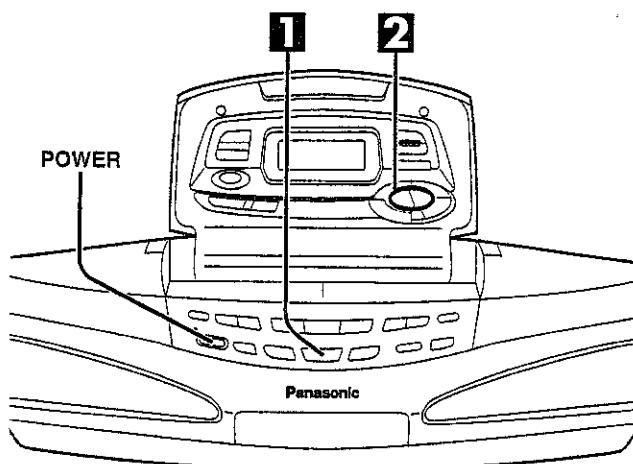
The display changes each time the button is pressed. ⑥

- The tape plays from the side facing up to reverse side, and then it stops automatically.
- The tape plays repeatedly until ■ (STOP) is pressed.
(When cassettes are inserted into both decks, both play continuously.)
- Only one side of the tape is played, and then the tape stops automatically.

To listen continuously to two tapes in succession:

1. Load tapes into deck 1 and deck 2.
2. Select the reverse mode (→).
3. Select which deck is to start tape by pressing DECK 1/2.
4. Press ↲ ▶ to start the tape play.
The tape plays from repeatedly until ■ (STOP) is pressed.

Listening to the Radio



Press POWER.

(Only when the batteries are used for the power supply)

① For United Kingdom:

Press BAND to display "LW", "MW" or "FM".

The display changes each time the button is pressed. ②

For areas except United Kingdom:

Press BAND to display "AM" or "FM".

The display changes each time the button is pressed. ③

② Press +/▶▶ or -/◀◀ to select the station.

+/▶▶: The frequency is increased.

-/◀◀: The frequency is reduced.

Adjust the frequency until **TUNED** is displayed on the panel (the display blinks or does not light when reception is weak).

Automatic tuning:

Keep +/▶▶ or -/◀◀ depressed until the frequency display starts to change. A station with good reception is automatically selected and the selection process then stops.

To stop automatic tuning, press +/▶▶ or -/◀◀ again.

Hint

- Pressing BAND will automatically turn the unit on and receive the broadcasts which is previously tuned (only AC power is supplied).

- The automatic tuning may stop without a station having been tuned in when interference is encountered on neighboring airwaves. In such a case, tune in a station by tapping +/▶▶ or -/◀◀.

Adjusting the antenna

For FM reception: **A**

Adjust the length and direction of the whip antenna.

For AM (LW/MW) reception: **B**

Adjust the direction in which the main unit is pointed.

For your reference:

Radio broadcasts may be hard to receive in a moving vehicle or building because their signals are weak. In such cases, use the unit near by a window.

For areas except United Kingdom:

AM allocation setting

Before receiving the AM broadcasts, be sure to select the correct allocation setting (either 9 kHz or 10 kHz) according to your area.

① Press BAND to select FM.

② Press and hold BAND for approximately 5 seconds.

The frequency display will be returned to the minimum frequency of the AM band and the display will begin to flash. Keep holding for approximately 5 more seconds. **C**

③ When the display stops flashing and indicates a different frequency number, release BAND. **D**

To return to the original frequency, repeat steps 1 to 3 above.

Listening to the Radio

When interference of FM stereo reception occurs A

(Available only from the remote control)

Set the sound to the monaural mode to reduce the noise.
Press ST/MONO/BP.

The MONO display appears.

The monaural sound is set but noises are reduced and sound become clear.

To return to stereo sound, press ST/MONO/BP again to turn off the MONO display.

Keep the MONO display off in usual and FM stereo programs can be heard as stereo sound.

Preset tuning

Once broadcast stations have been programmed, they can easily be turned in.

Up to ten FM, AM (LW/MW) stations each can be programmed.

Programming broadcast stations

(Available only from the main unit)

Preset radio stations on the FM, AM (LW/MW) band.

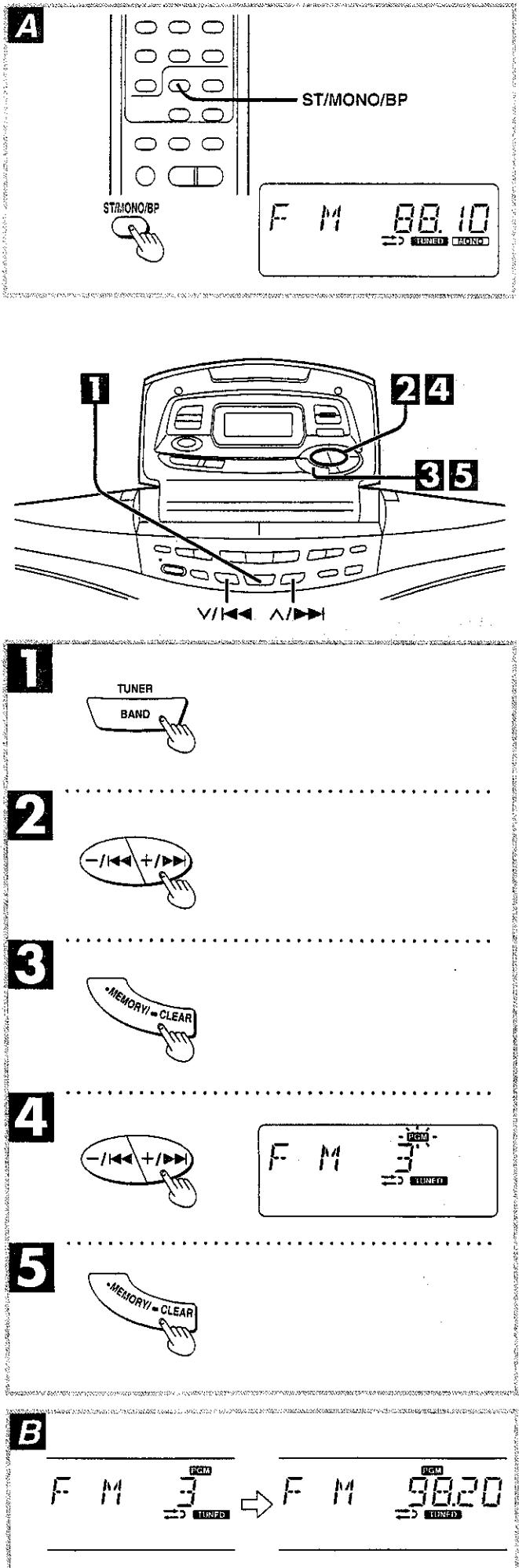
- 1** For United Kingdom:
Press BAND to display "LW", "MW" or "FM".
For areas except United Kingdom:
Press BAND to display "AM" or "FM".
- 2** Press +/▶ or -/◀ to select the station.
- 3** Press •MEMORY once.
PGM flashes.
- 4** While PGM is flashing,
Press +/▶ or -/◀ to display the preset channel to be programmed.
- 5** While PGM is flashing,
Press •MEMORY.
If the PGM indicator goes during programming, return to step 3.
- 6** Repeat steps 2 to 5 to program other stations.

Selecting the preset channel

- 1** For United Kingdom:
Press BAND to display "LW", "MW" or "FM".
For areas except United Kingdom:
Press BAND to display "AM" or "FM".

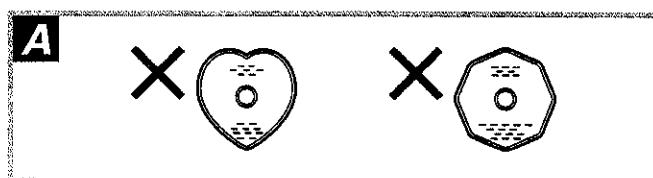
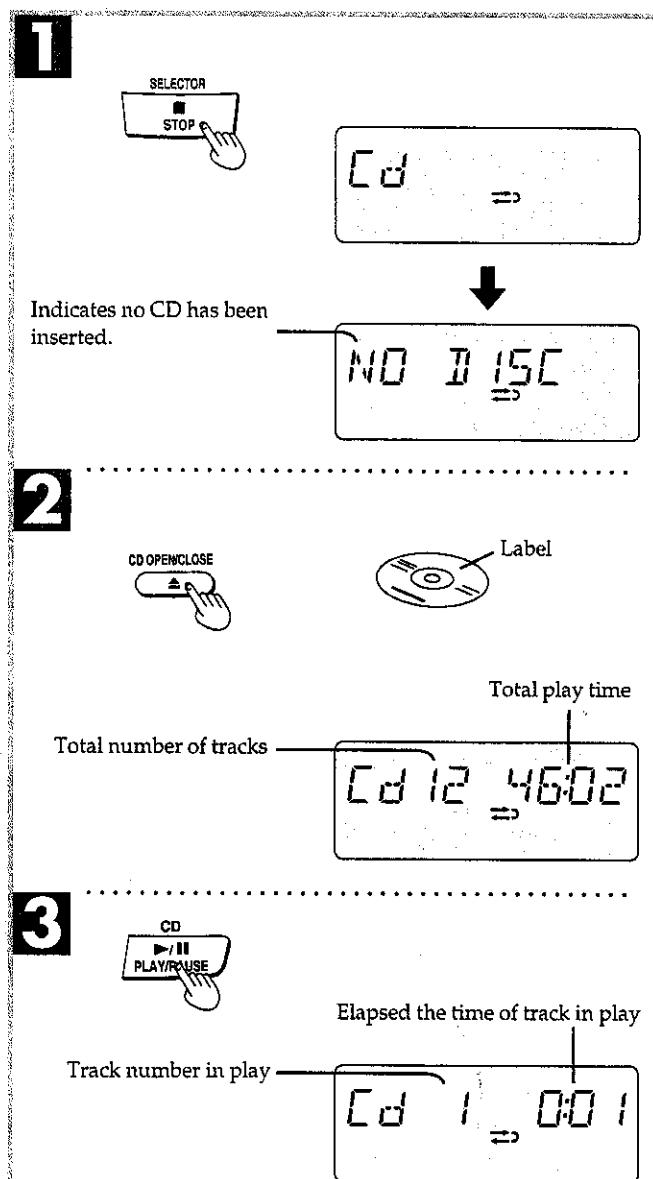
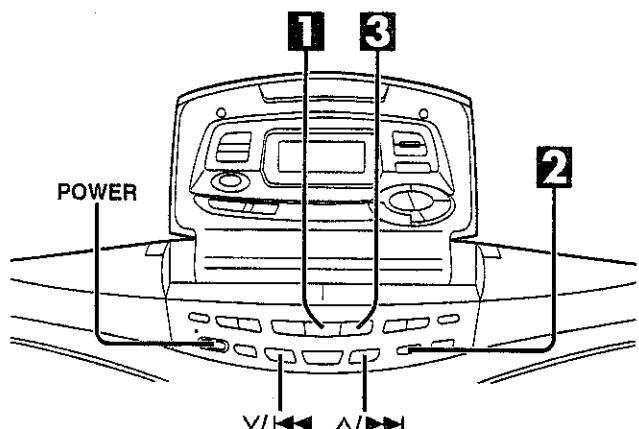
- 2** Select the preset channel. B

	Down	Up
Main unit	▼/◀	▲/▶
Remote control	▼	▲



Listening to CDs

Listening



Press POWER.

(When using batteries for the power supply)

1 Press ■ STOP to select the CD mode.

CD → TAPE

(The display changes each time the button is pressed.)

2 Press ▲ CD OPEN/CLOSE, insert a CD and press the ▲ again.

Insert the CD with the label facing up.

3 Press ▶/■ PLAY/PAUSE.

Plays to the last track and automatically stops.

To stop playing:

Press ■ STOP.

Press ▶/■ to pause play.

Press ▶/■ to return to play mode.

Note

- If interference occurs to radios or televisions, place the unit as far as possible from this equipment.

- Do not use irregular shape CDs (heart-shape, octagonal, etc.). **A**

Hint

Pressing ▶/■ automatically turns the unit on, and if a CD is inserted, begins play (only when AC power is supplied).

Skipping tracks

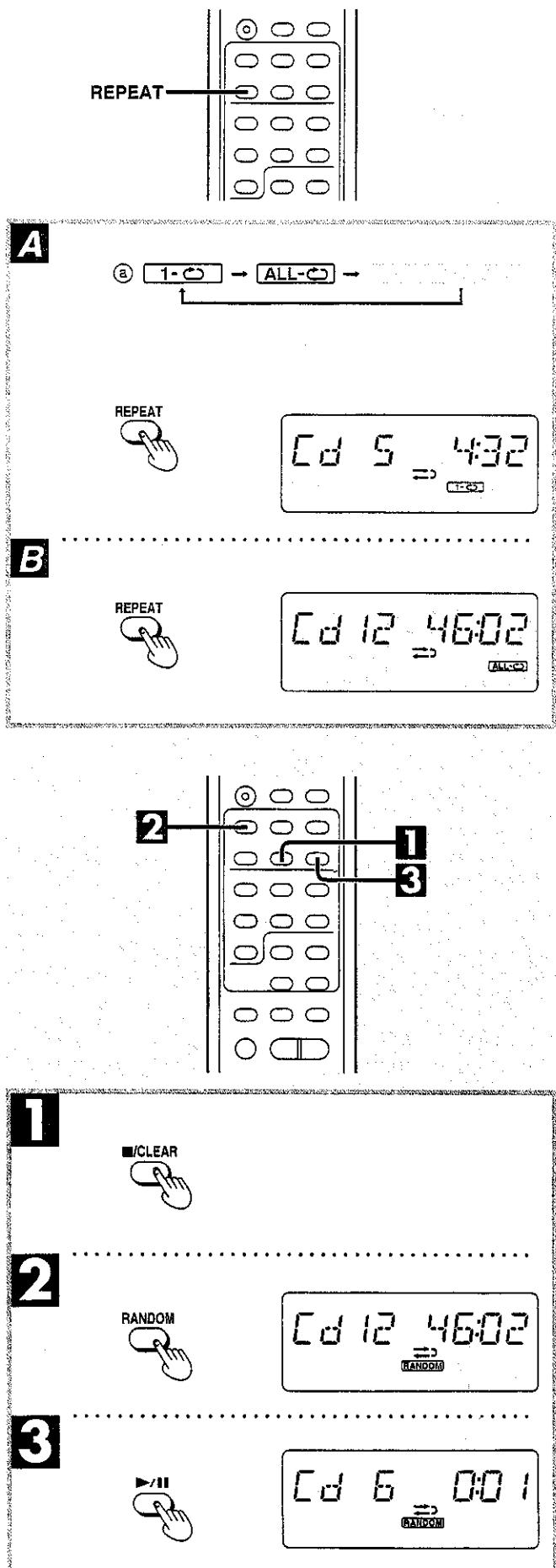
Press the button once for each track to be skipped.

	Backward	Forward
Main unit	▼/◀	▲/▶
Remote control	◀	▶

Fast forwarding and rewinding

Keep the button pressed during play or pause mode.

	Backward	Forward
Main unit	▼/◀	▲/▶
Remote control	◀	▶

**Repeating tracks**

(Only from the remote control)

Press REPEAT.The display changes each time the button is pressed. **a****To repeat only one track:**Press REPEAT to display **1-CD**. **A****To repeat all tracks on the CD:**Press REPEAT to display **ALL-CD**. **B****To repeat programmed tracks:**

① Program desired tracks (steps 1 to 4 on page 16).

② Press REPEAT to display **ALL-CD**.③ Press **>/II** to begin play.**To clear the repeat function:**Press REPEAT to cancel **1-CD** or **ALL-CD**.**Random play**

(Only from the remote control)

1 Press **■/CLEAR** to select the CD mode.**2** Press **RANDOM** when CD is in stop mode.**RANDOM** is not displayed if pressed when CD is in play mode.**3** Press **>/II**.

All tracks play at random, and play automatically stops.

To cancel random play:Press **RANDOM** to clear **RANDOM** display.

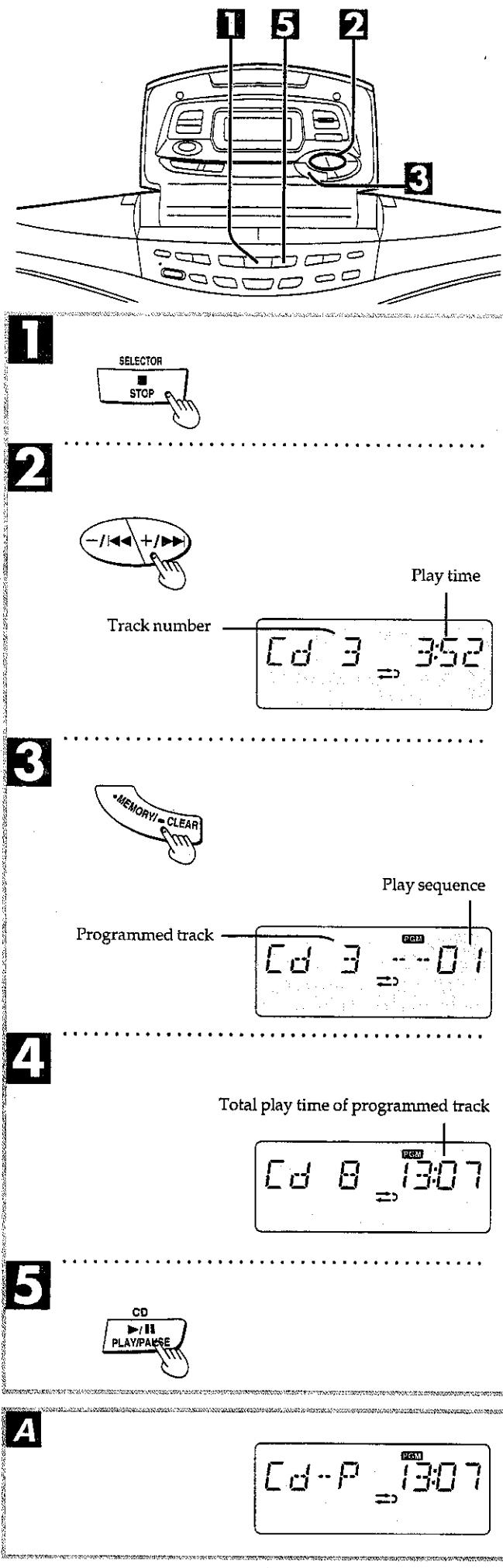
• If cancelled during random play, the CD plays from the track in play to the end of the CD, and automatically stops.

Notes

• Random play cannot be used in combination with program play.

• Skipping to tracks which have already been played is not possible.

• Searching forward and backward are possible only within the track in play.

Listening to CDs**Selecting and listening to favorite tracks
(Program play)**

Up to 36 tracks can be programmed.
(Only from the main unit)

- 1** Press ■ STOP to select the CD mode.
When RANDOM is displayed, press RANDOM on the remote control to clear the display.
- 2** Press +/▶ or -/◀ to select desired track.
- 3** Press •MEMORY to record the selection.
- 4** Continue programming by repeating steps 2 and 3.
- 5** Press ▶/■ PLAY/PAUSE.
Selected tracks play in the programmed sequence, and play automatically stops.

To cancel program play:

(From the main unit)
Keep the •MEMORY/ - CLEAR pressed when CD is in stop mode until "CLEAR" is displayed.

(From the remote control)
Press ■/CLEAR when CD is in stop mode to display "CLEAR".
Program play can also be cleared by pressing ▲ CD OPEN/CLOSE.

When "—:—" is displayed:

Total play time of the programmed tracks exceeds 120 minutes.

When "FULL" is displayed:

36 tracks have already been programmed. No further tracks can be programmed.

To check programming:

Press ▲/▶ or ▼/◀ when CD is in stop mode.
The track number and its play sequence can be checked each time these buttons are pressed.

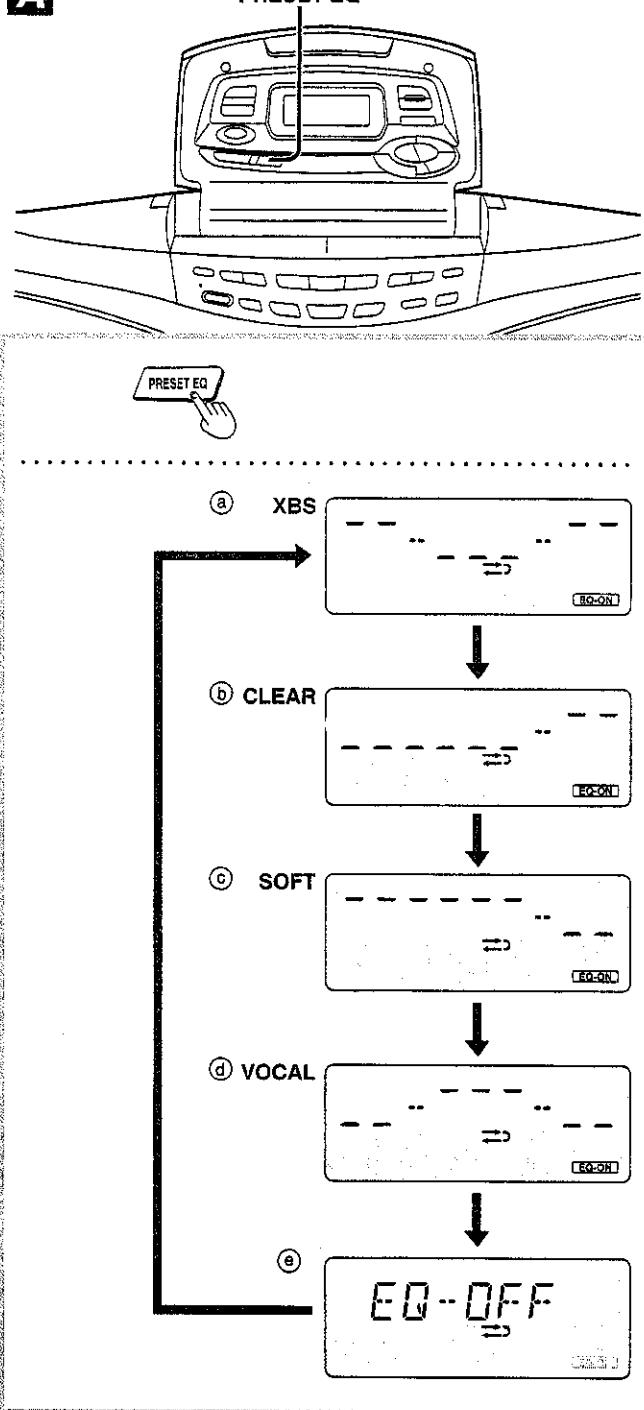
Memory retention of programmed tracks:

Track programming is retained even if play is stopped or the unit is turned off.
A displayed "P" indicates that programming is retained in the memory. A

Changing the Sound Quality

A

PRESET EQ



Selecting equalizer effects

A

Four types of sound quality can be selected.

Press PRESET EQ to select desired sound quality.

The displayed image of a sound quality effect changes each time the button is pressed.

- (a) Gives added punch to rock and other music (XBS)
- (b) Lightens pop and other music (CLEAR)
- (c) Allows BGM enjoyment (SOFT)
- (d) Enhances vocals (VOCAL)
- (e) No sound quality effects used.

Using the "live" effect (Sound Virtualizer)

B

The "live" effect allows enjoyment of the 3-D feeling of listening to live music. Compared with earlier surround sound systems, the sound virtualizer leaves middle-range sounds such as vocals clear and gives natural width and depth to music.

Sound virtualizer is effective with stereo sound.

Press S.VIRTUALIZER to display S.VIRTUALIZER.

To cancel:

Press S.VIRTUALIZER to clear the S.VIRTUALIZER indicator.

- When listening through headphones

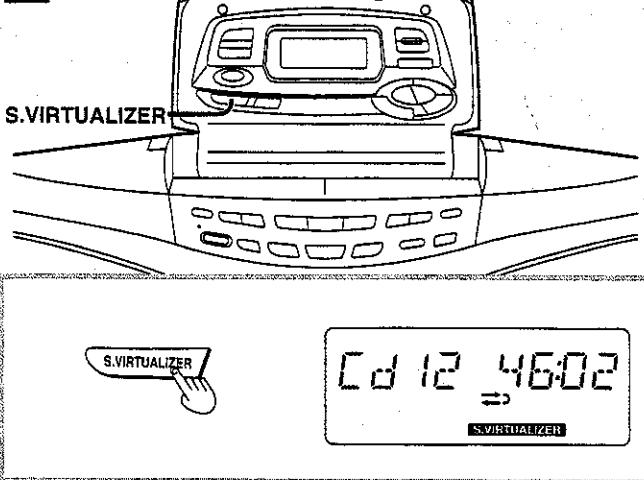
The effect is less discernable than through the unit speakers.

- When high sounds are felt to be too strong

High-range sounds are difficult to listen to with some kinds of music. In this case, adjust the music using the preset equalizer until music reaches a pleasant range.

- When excessive interference in the FM stereo reception occurs

If interference increases, cancel the sound virtualizer effect.

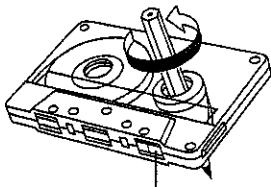
B

Preparation for Recording

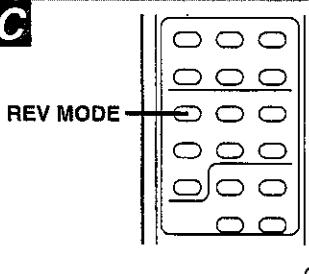
A

Side to be recorded facing up.

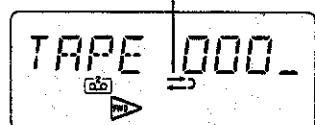
Insert the tape with the exposed tape facing you.

B

Leader tape (on which nothing can be recorded)

C

Reverse mode



Type of tape which can be used for recording

Automatically identifies the type of tapes.

Normal position/TYPE I	<input type="radio"/>
High position/TYPE II	<input type="radio"/>
Metal position/TYPE IV	<input checked="" type="radio"/>

This unit can not make a recording or erase correctly, if metal position tapes are used.

Load the tape in deck 2 with the side to be recorded first facing up. **[A]**

The \gg automatically selected when the cassette with the side to be recorded facing up.

- When recording from the begining of a cassette

Wind the leader tape out. **[B]**

- When recording from the middle of a cassette

Stop the cassette at the position where recording is to begin.

Press REV MODE on the remote control to select the mode. **[C]**

$\rightarrow \leftarrow \gg \ll$: Records from the side facing up to the opposite side and automatically stops.

\rightarrow : Records only one side of the cassette and automatically stops.

Notes

- You cannot operate deck 1 during recording.

"E" is displayed when you attempt to operate deck 1.

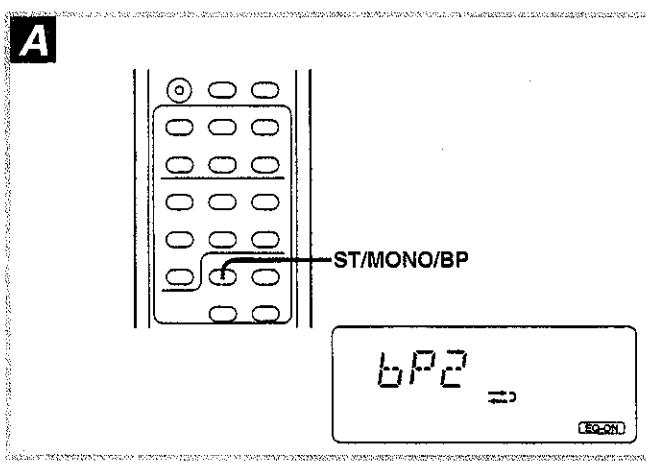
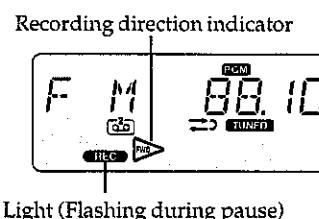
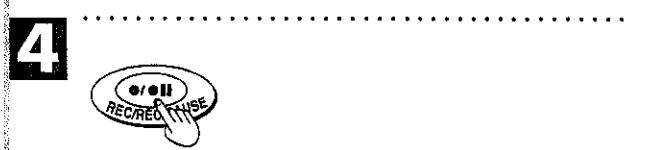
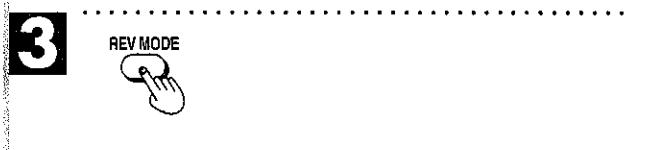
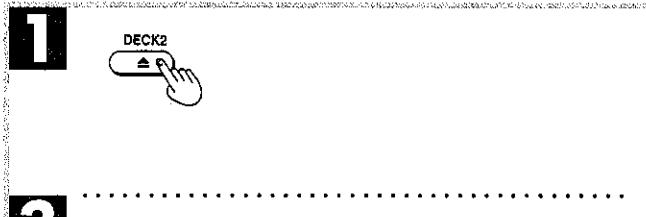
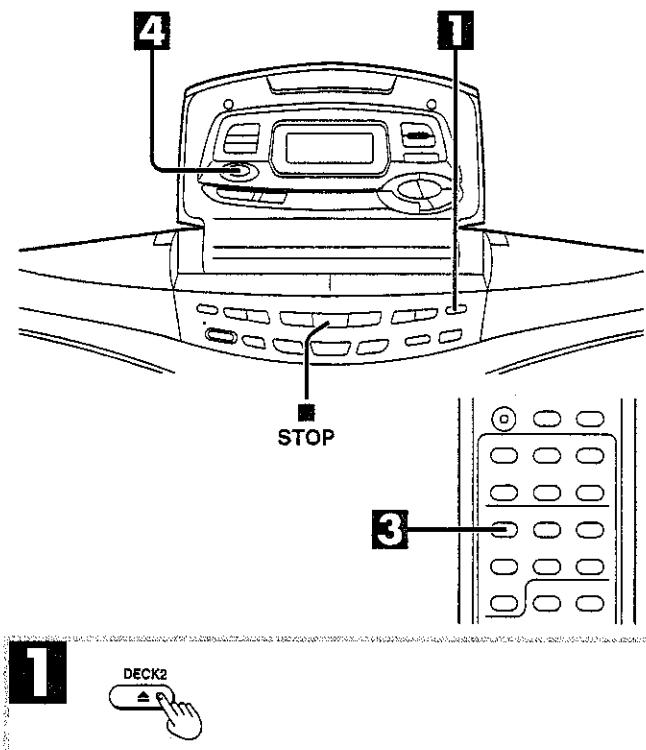
- Any change made to the volume or sound quality during recording will not affect the recording.

- In order to prevent trouble caused by flat batteries, it is recommended that you either supply power to the unit from the household AC outlet or replace all the batteries with new ones when you are recording something which is important to you.

- The recording level is set automatically.

Your attention is drawn to the fact that recording pre-recorded tapes or discs or other published or broadcast material may infringe copyright laws.

Recording Radio Programs (Only Deck 2)



- 1** Insert cassette into deck 2 with the side to be recorded facing up.
- 2** Select desired radio station.
(Refer to pages 12 to 13)
- 3** Select the mode with REV MODE on the remote control.
- 4** Press ●/● REC/REC PAUSE.
"FWD REC" is displayed and recording begins. "REV REC" is displayed when recording begins while ▶ is displayed.

To stop recording:

Press ■.

To stop recording temporarily:

Press ●/● REC/REC PAUSE.

To resume recording, press ●/● REC/REC PAUSE.

When there is too much interference during AM (LW/MW) recording **A**

(Available only from the remote control)

For United Kingdom:

Press ST/MONO/BP.

Select "bP1", "bP2" or "bP3" whichever yields less noise.

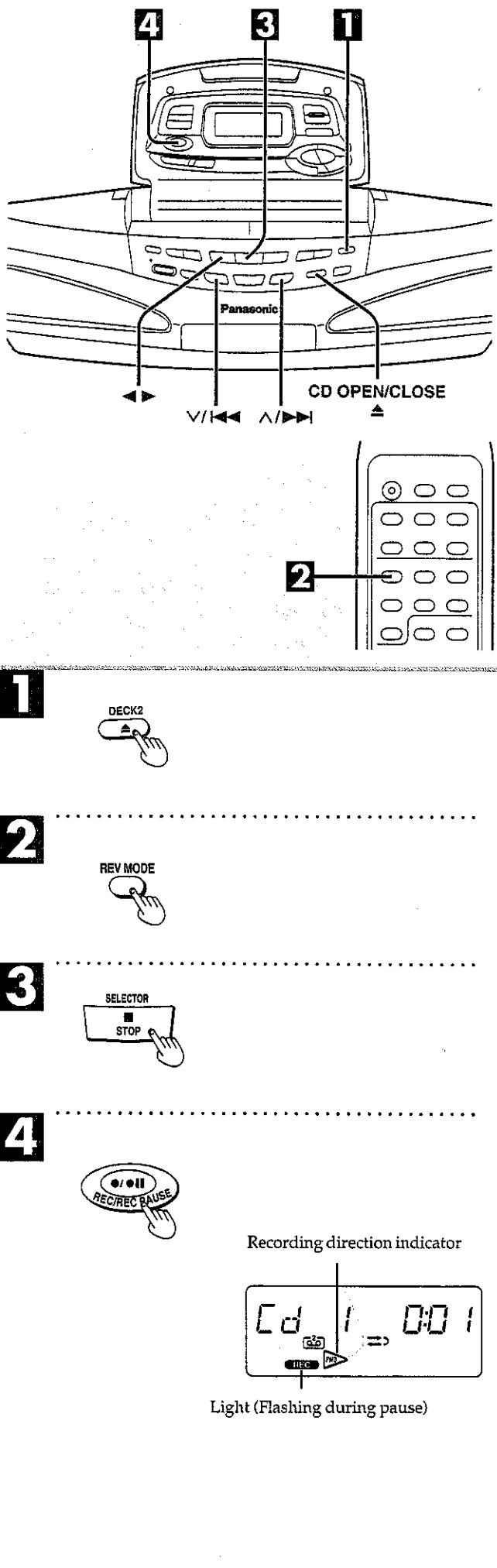
Note

bP3 is available only for LW.

For areas except United Kingdom:

Press ST/MONO/BP.

Select "bP1" or "bP2" whichever yields less noise.



Recording from CD (Only Deck 2)

Recording and CD play automatically begin simultaneously.
Getting ready: insert the CD.

- 1 Open the cassette cover on deck 2 and insert the cassette with the side to be recorded facing up.

Tape length must be longer than the CD play time.

- 2 Select the mode with REV MODE on the remote control.

- 3 Press ■ STOP to select the CD mode.

CD → TAPE

(The display changes each time the button is pressed.)

- 4 Press ●/● II REC/REC PAUSE.

"FWD REC" is displayed and recording and CD play begin simultaneously. "REV REC" is displayed when recording begins while ▶ is displayed.

To stop recording:

Press ■ STOP.

To pause recording:

Press ●/● II (CD will also pause).

To begin recording again, press ●/● II.

After recording

When CD play is finished, the cassette simultaneously stops.

To continue recording a different CD on the same cassette:

- 1 Press ▲ CD OPEN/CLOSE and replace the CD.
- 2 Press ●/● II.

Recording favorite tracks

Program desired tracks (refer to steps 1 to 4 on page 16) after step 3.

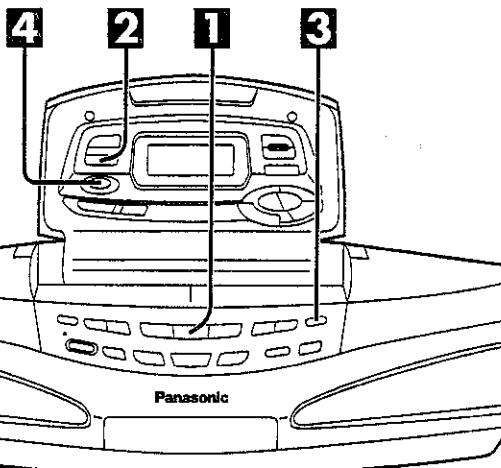
To skip tracks not to be recorded

- 1 Press ●/● II during recording.
CD will also pause.
- 2 Press ▲/▶ or ▼/◀ to display the number of the next track to be recorded.
- 3 Press ●/● II to begin recording again.

To change cassette direction during recording

Press ▲/▶ when ▶ is displayed.

When ▶ is displayed, press ●/● II to pause, then press ▲/▶ and ●/● II again.

**Easy CD recording (Auto)**

Records all tracks or programmed tracks of a CD in programmed order.

- It is not necessary to rewind the cassette. Recording always begins from the beginning of the side facing up.
- If the side ends in the middle of a track, the track which was cut off is recorded on the opposite side from the beginning.

Getting ready: insert the CD.

1 Press ■ STOP to select the CD mode.

2 Press CD REC MODE to display "AUTO".

The display changes each time the button is pressed. ① The necessary tape length will be displayed. (Example: Tape of 47 minutes or more necessary to record all tracks.)

When "C——" is displayed:

Auto-CD recording is not possible.
Follow the steps on page 20.

3 Insert a cassette which is longer than that displayed in step 2.

Insert with the side to be recorded first up.

4 Press ●/● II REC/REC PAUSE.

Automatically rewinds, and recording from the first track begins after a 10 second interval of silence.

Reverse mode is displayed as ←→.

- ① Rewinding tape
- ② Recording 10 second interval of silence
- ③ Recording begun

To stop recording (CD will also stop):

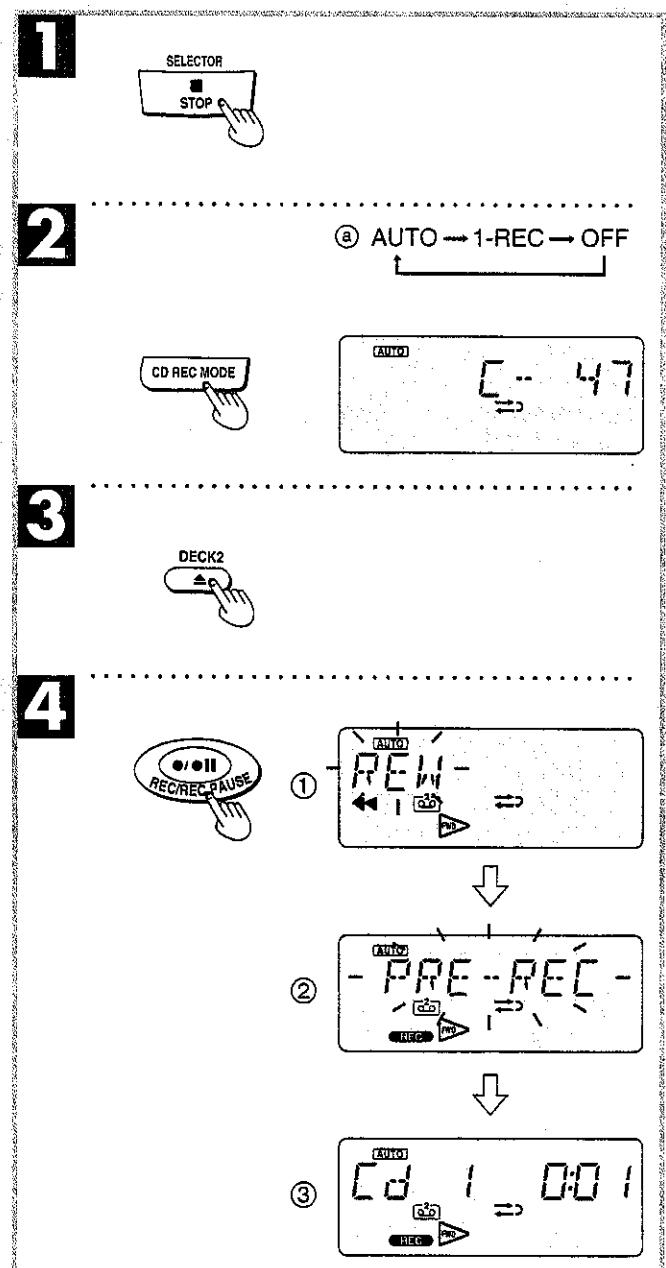
Press ■ STOP.

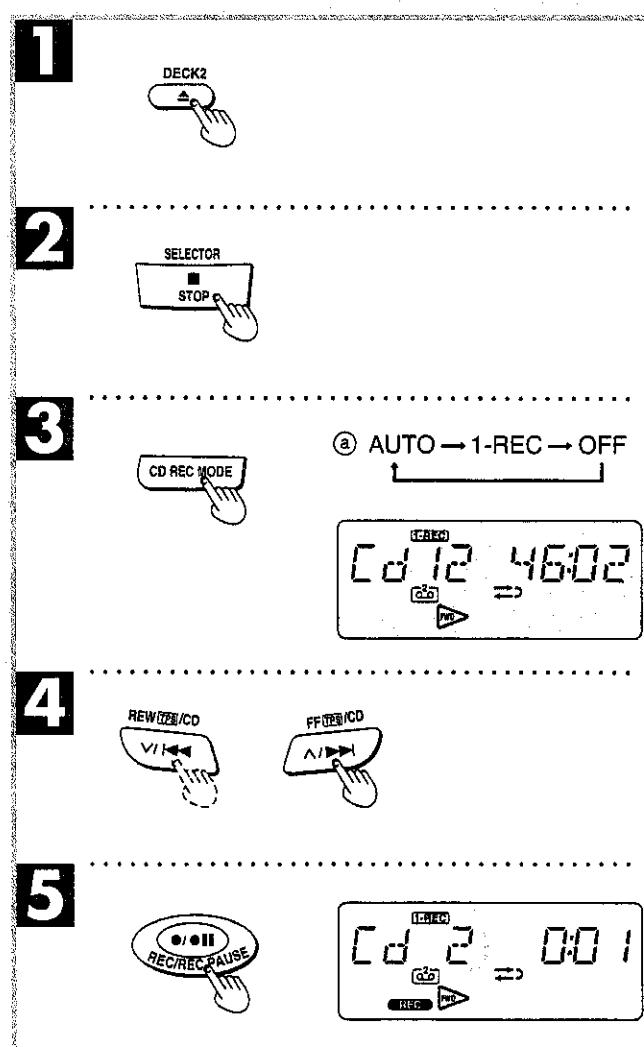
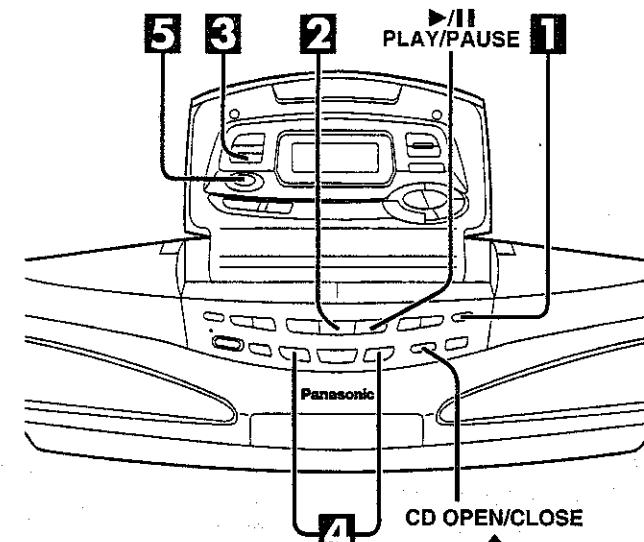
To record favorite tracks:

Program desired tracks (refer to steps 1 to 4 on page 16) after step 1.

Note

Auto CD recording cannot be used in combination with random play (refer to page 15).



**One track recording (1 TRACK)**

Records one track from the CD and stops. Convenient for recording one track each from many CDs.
Recording can begin from any place on the tape.
Getting ready: insert a CD.

1 Open the cassette cover on deck 2 and insert cassette with the side to be recorded facing up.

Recording direction is automatically set to begin from the side facing up (the \triangleright indicator is displayed).
Find the position on the tape where recording is to begin.

2 Press ■ STOP to select the CD mode.**3 Press CD REC MODE to display "1-REC".**

The display changes each time the button is pressed. ⑧

4 Press \wedge/\gg or \vee/\ll to select the track to be recorded.

Omit this step when recording the first track on the CD.

5 Press ●/● II REC/REC PAUSE.

CD play and recording begin simultaneously. Records only one track and stops.
Reverse mode is displayed as $\ll\triangleright$.

- If the track is interrupted when the end of the cassette is reached, recording automatically begins again from the beginning of the track on the opposite side (if recording was begun on the opposite side, recording stops at the end of the present side).

To continue recording with another CD:

Press Δ CD OPEN/CLOSE, insert a CD and follow steps 4 and 5.

To stop recording (CD will also stop):

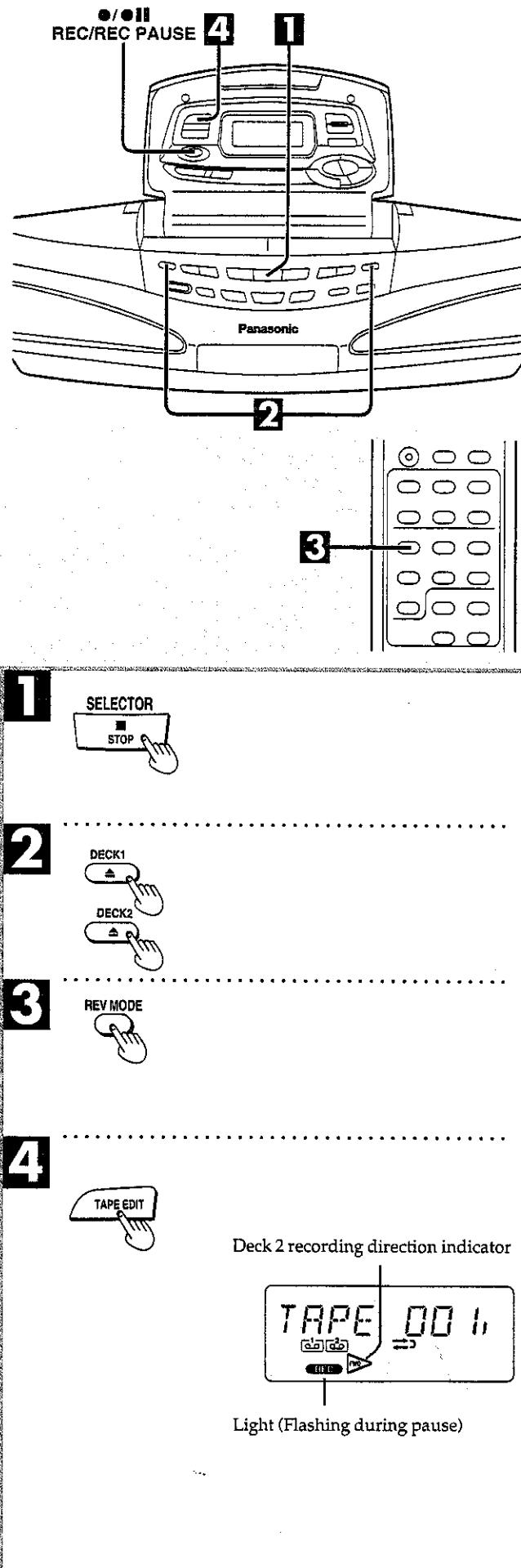
Press ■ STOP.

Hint

Try listening to the track to check the type of song it is before recording. Press CD REC MODE to display "1-REC," then \gg/\ll to play the CD.

Press ●/● II to record a song you like during CD play. The track is recorded from the beginning.

Recording Tape to Tape



1 Press ■ STOP to select the cassette mode.
CD \longleftrightarrow TAPE

(The display changes each time the button is pressed.)

2 Insert the playback cassette into deck 1 and the recording cassette into deck 2.

3 Press REV MODE on the remote control to select the mode.

4 Press TAPE EDIT.

Play on deck 1 and recording on deck 2 begin simultaneously.

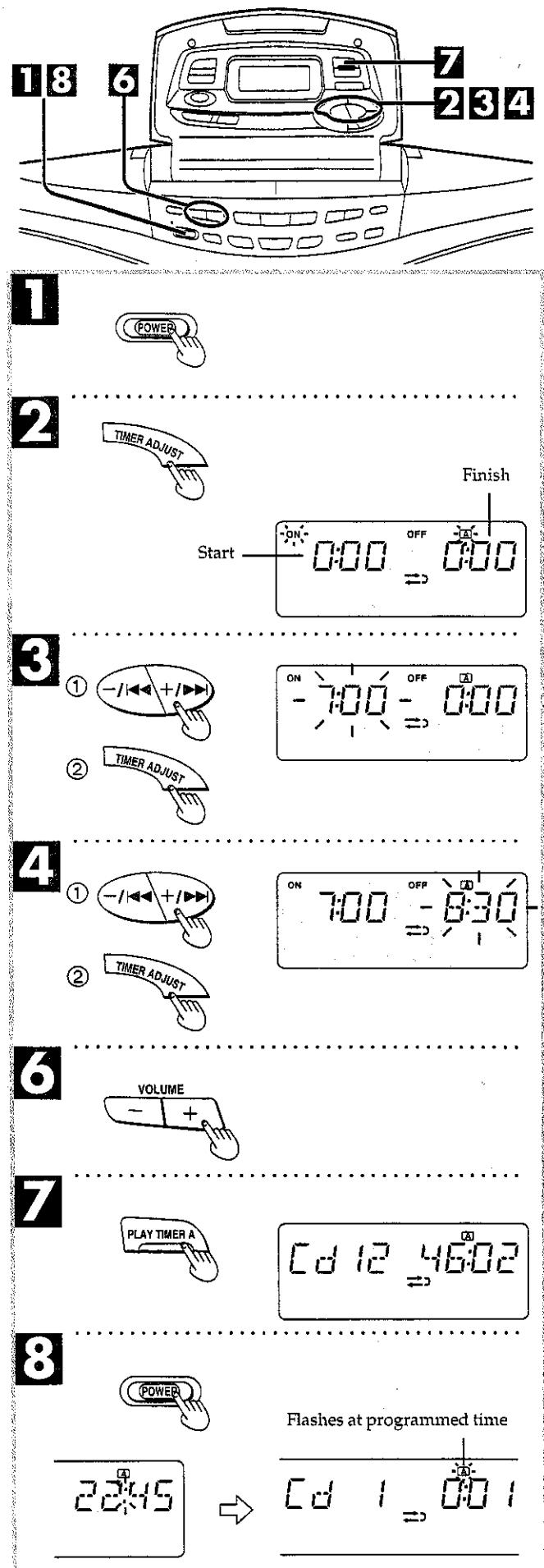
To stop recording:

Press ■.

To temporarily stop recording:

Press ●/● ■ REC/REC PAUSE.

To resume recording, press TAPE EDIT.



Using the Play Timer

The clock has a 24-hour display.

Timers A and B can be set and used separately for the play start/finish times.

Example: Setting CD play from 7:00 to 8:30 on play timer A.

Setting the start and finish times

- Press POWER to turn the unit on.
- Press TIMER ADJUST to set "ON [A]" or "ON [B]" flashing.
ON [A] → OFF [A] → ON [B] → OFF [B]
Original Display ← OFF [REC] ← ON [REC] ←
- ① Press +/▶ or -/◀ when "ON [A]" or "ON [B]" is flashing to set the start time.
② Press TIMER ADJUST.
Finish time flashes.
- ① Press +/▶ or -/◀ to set the finish time.
② Press TIMER ADJUST.
Display returns to original mode.
When "E" is displayed:
Check whether start and finish are set for the same time.

Programming play

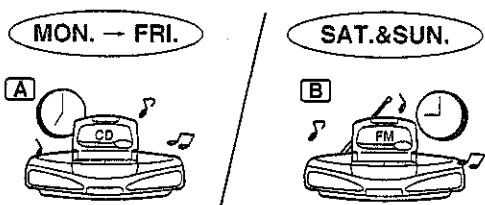
- Get the music source ready.
Listening to cassettes: refer to pages 10 to 11.
• When used in combination with the recording timer
Always insert the cassette to be played into deck 1 and display the indicator.
Listening to the radio: refer to pages 12 to 13.
Listening to CDs: refer to pages 14 to 16.
- Press VOLUME to adjust volume for time of play.

Setting the timer function

- Press PLAY TIMER A (or B) to display "PLAY".
When "E" is displayed:
Check whether the clock has been set (page 9).
- Press POWER to turn the unit off.
Programming can be checked when the unit is off (page 27).

Using the Play Timer

A



To clear the timer function:

Press PLAY TIMER A (or B) when the unit is on to clear the **A** or **B** display.

To play music after programming: (after step 7)

- ① Begin play of the desired music source.

Programmed play timer information is retained in the memory even if the volume or music source is changed when music is played.

- ② After playing music, turn the unit off.

• Cassette deck and direction displayed when the unit is turned off are activated in the play timer. After playing music, check the play timer deck and direction before turning the unit off.

- When using the play timer with a CD, check the setting of the random, repeat or programmed play mode before turning the unit off.

Note

Always turn the unit off before the programmed start time. The timer does not activate when the unit is turned on.

To change the source or volume of the timer function:

Press PLAY TIMER A or B to clear the **A** or **B** indicator and follow steps 5 to 8.

To use the timer at the same time daily:

Check that **A** or **B** is displayed and turn the unit off.

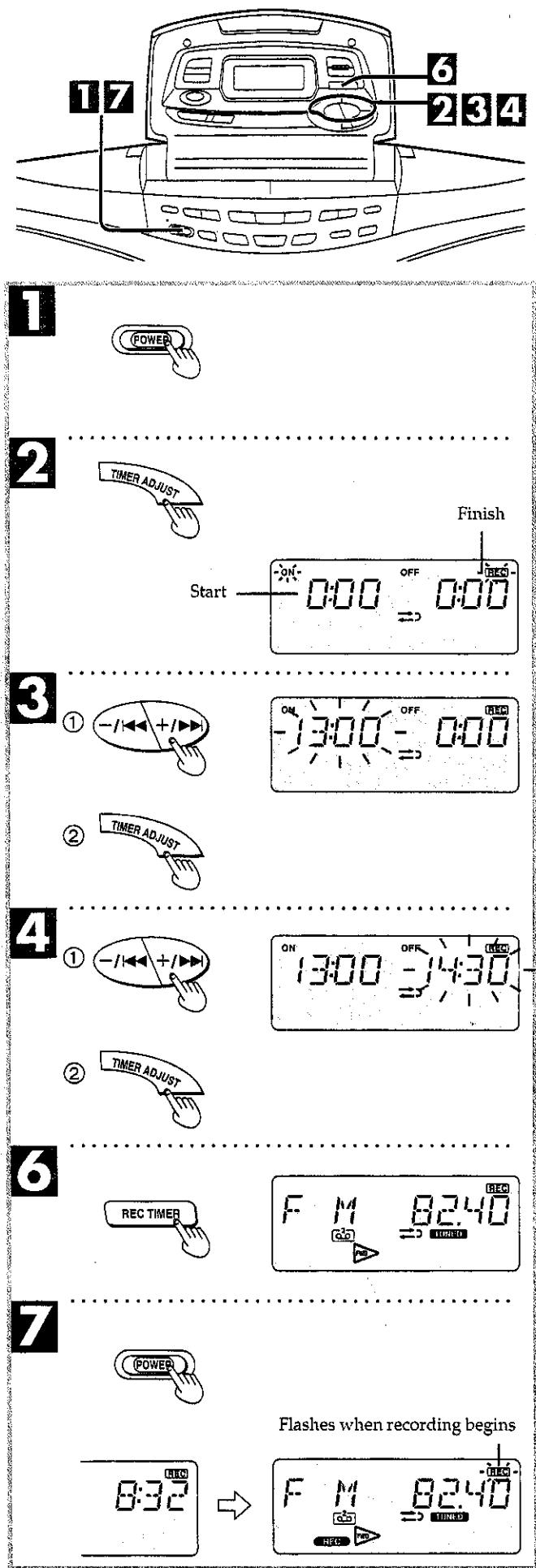
Using the timers A and B separately

Example: Listening to CDs from 7:00 on weekdays and FM broadcasting from 9:00 on weekends. A

- ① Program play timer A for CD play.
- ② Program play timer B for radio programming.
- ③ Display **A** on weekdays and **B** on weekends (steps 7 on page 24).

● **A** and **B** cannot be displayed simultaneously.

Using the Recording Timer



The clock has a 24-hour display.

Radio broadcasts can be recorded at a programmed time.

Example: Recording radio broadcasting from 13:00 to 14:30

Setting the start and finish times

- 1** Press POWER.
- 2** Press TIMER ADJUST to set "ON [REC]" flashing.
→ ON A → OFF A → ON B → OFF B
Original display ← OFF [REC] ← ON [REC]
(The display changes each time the button is pressed.)
- 3** ① Press +/▶▶ or -/◀◀ while "ON [REC]" is flashing to set the start time.
② Press TIMER ADJUST.
Finish time flashes.
- 4** ① Press +/▶▶ or -/◀◀ to set the finish time.
② Press TIMER ADJUST.
Display returns to original mode.
When "E" is displayed:
Check whether start and finish are set for the same time.

Programming recording

- 5** Get the music source ready.
 - ① Select radio station.
 - ② Insert cassette into deck 2.
 - ③ Press REV MODE on the remote control to select the mode.
 - Reduce the volume when listening during recording is not desired.
 - If there is excessive interference when recording an AM (LW/MW) station, press ST/MONO/BP to switch to reduced static.

Setting the timer function

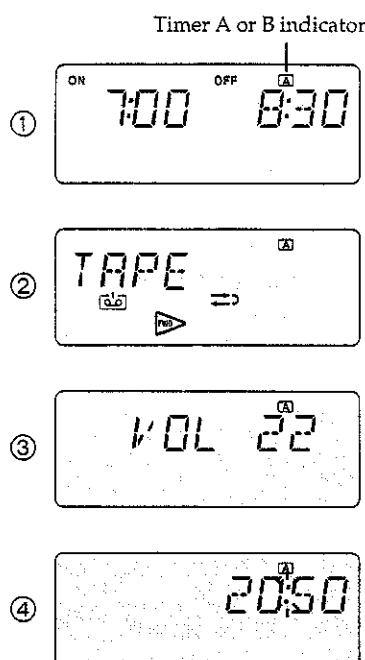
- 6** Press REC TIMER to display "REC".
When "E" is displayed:
Check whether the clock has been set (page 9).
- 7** Press POWER to turn the unit off.
Programming can be checked when the unit is off (page 27).
The unit turns on approximately 30 seconds before the set start time and recording begins.

To clear the timer function:

Press REC TIMER when the unit is on to clear the [REC] indicator.

Using the Recording Timer

A



To play music after programming: (after step 6)

- ① Begin play of desired music source.

Programming for the recording time remains in the memory even if the volume or source is changed during play.

- ② After playing music, turn the unit off.

Direction displayed when unit is turned off is activated in the recording timer. After playing music, check the direction (▶ or ◀) of the cassette to be recorded before turning the unit off.

To change the radio station to be recorded:

Press REC TIMER to clear the [REC] indicator and follow steps 5 to 7.

To use the timer at the same time daily:

Check that [REC] is displayed and turn the unit off.

Note

Always turn the unit off before the programmed start time. The timer does not activate if unit is on.

To check programming

Play and recording timer programming can be checked.

Press TIMER ADJUST when unit is off.

The display automatically changes in the following order.

Display example: Play tape from 7:00 to 8:30 on play timer A. A

- ① Programmed time
- ② Programmed music source
[TAPE] and [▶] (◀) are not displayed when batteries are used as the power source.
- ③ Timer volume
- ④ Original display

Using the play and recording timers in combination

Example: Waking up to a cassette in the morning and recording radio programing while away B

- ① Program play timer (A or B) for cassette play (page 24).
- ② Program recording timer for radio recording and insert recording cassette into deck 2 (page 26).
- Insert the playback cassette into deck 1 and the recording cassette into deck 2. In this case, the play timer operates only on deck 1.

When programmed times overlap

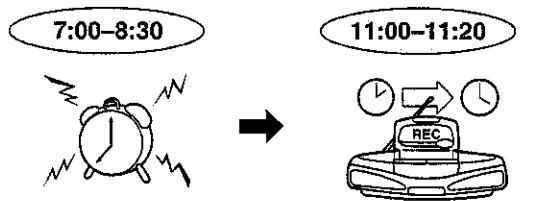
- When recording is programmed to begin during play timer operation C

Cancels play and begins recording.

- When play is programmed to begin during recording timer operation D

Continues recording. The play timer is not activated.

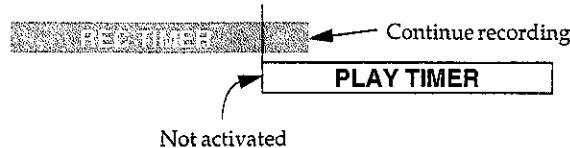
B



C

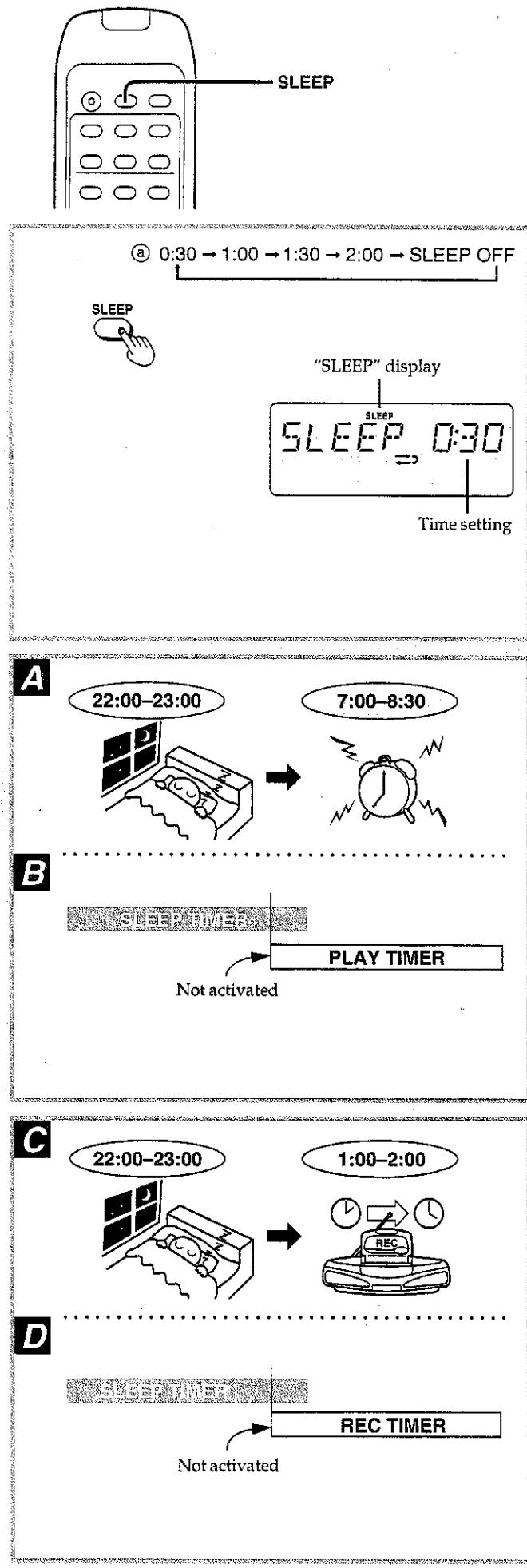


D



Timer

Using the Sleep Timer



(Available only from the remote control)
The unit off time can be set up to two hours ahead of the present time.

Press SLEEP to select the desired time.

The display changes each time the button is pressed. ①

The unit is turned off after the time set has elapsed.

To release the timer function:

Press SLEEP to select "SLEEP OFF".

To check the time remaining during operation:

Press SLEEP.

To change the time remaining during operation:

Press SLEEP to show the remaining time then SLEEP to select the desired time.

Hint

Pressing SLEEP can turn the unit on (only AC power is supplied).

Using the sleep and play timers in combination

Example: Falling asleep listening to FM programming and waking up the next morning listening to a CD. A

- ① Program the play timer (A or B) for CD play (page 24).
- ② Select the desired radio station and set the sleep timer.
Plays the CD at the volume programmed in the morning even if it is reduced the night before.

When programmed times overlap B

When play is programmed to begin before the sleep timer turns the unit off, the play timer is not activated. The unit turns off after the programmed sleep timer is completed.
Always set the sleep timer so that the unit turns off by the time the play timer is programmed to begin.

Using the sleep and recording timers in combination

Example: Falling asleep listening to a cassette and recording FM programming during the night C

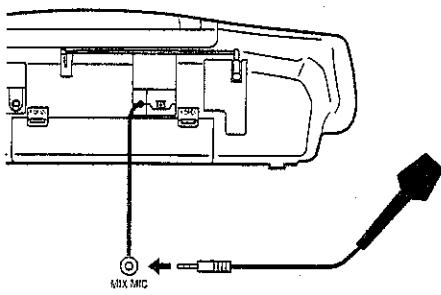
- ① Program the recording timer to record the FM programming and insert recording cassette into deck 2 (page 26).
- ② Insert the playback cassette into deck 1 and set the sleep timer.

When programmed times overlap D

When recording is programmed to begin before the sleep timer turns the unit off, the recording timer is not activated.
The unit turns off after the programmed sleep timer is completed.
Always set the sleep timer so that the unit turns off by the time the recording timer is programmed to begin.

Using an External Unit

Using microphone



Karaoke

1. Lower the volume and connect the microphone (not included).
2. Start playing a CD or tape, or turn on the radio.
3. Start karaoke singing and adjust the volume.

Recording karaoke sound with accompaniment from a CD

1. Lower the volume and connect the microphone.
2. Insert the CD and program desired track. (See page 16.)
3. Load the tape in deck 2.
4. Select the mode using REV MODE on the remote control.
5. Press **●/● II REC/REC PAUSE**.
Play and recording start.

Recording karaoke sound with accompaniment from a tape

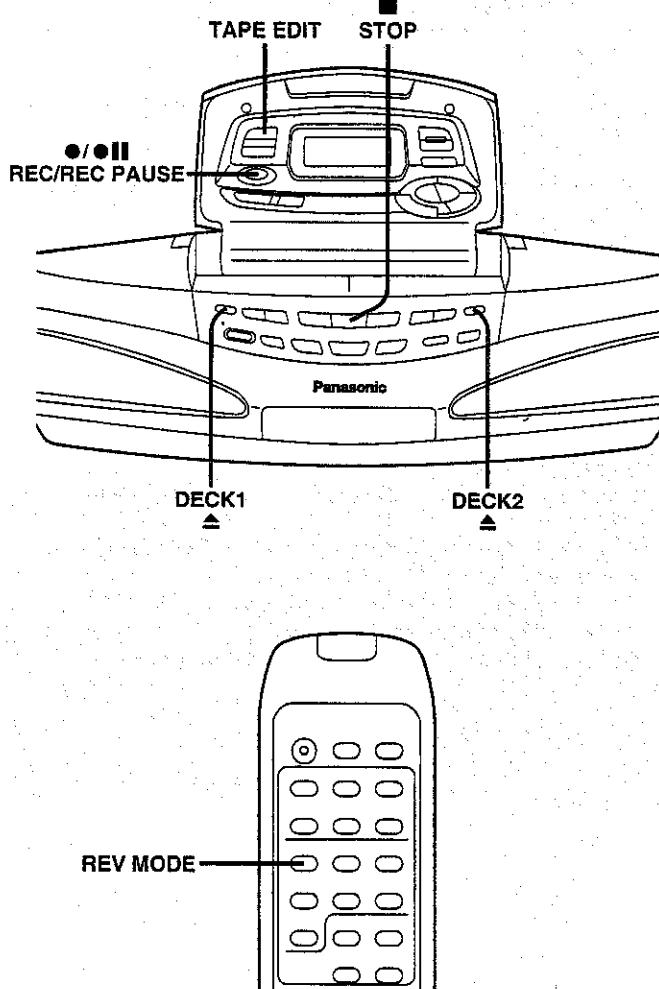
1. Lower the volume and connect the microphone.
2. Load the karaoke tape in deck 1 and the recording tape in deck 2.
3. Select the mode using REV MODE on the remote control.
4. Press **■**.
5. Press TAPE EDIT.
Playback and recording start

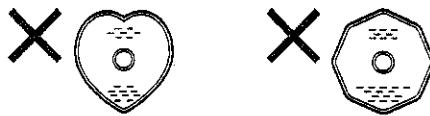
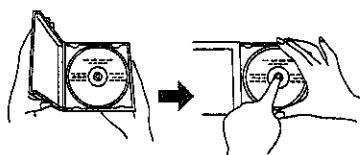
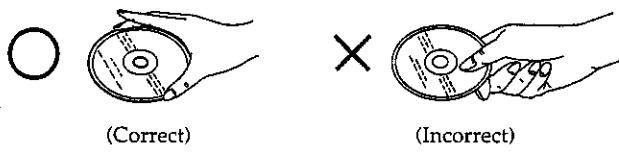
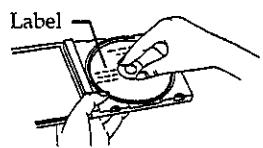
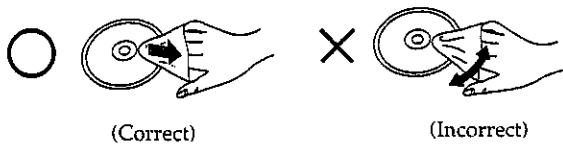
Recording the sound through the microphone

1. Lower the volume and connect the microphone.
2. Press **■**.
3. Load the tape in deck 2.
4. Select the mode using REV MODE on the remote control.
5. Press **●/● II REC/REC PAUSE**.
Recording starts.

Note

When karaoke singing with accompaniment from a CD, sound is heard only while the CD is playing. No sound is heard in the stop or pause mode.



A**B****C****D****E**

Concerning Compact Discs

Only compact discs having this mark can be used with this unit. However, do not use irregular shape CDs (heart-shape, octagonal, etc.). CDs of the sort can damage the unit. **A**

To remove a disc from its case **B**

Press the center holder and lift the disc holding by the edges.

To hold the disc **C**

Hold the disc by the edge so the surface is not soiled with fingerprints.

Fingerprints, dirt and scratches can cause skipping and distortion.

To store a disc in its case **D**

Insert the disc with label facing upwards and press downward at the center.

If the surface is soiled **E**

Wipe gently with a soft, damp (water only) cloth.

If the disc is brought from a cold to a warm environment, moisture may form on the disc.

Wipe this moisture off with a soft,dry,lint-free cloth before using the disc.

Improper disc storage:

You can damage discs if you store them in the following places;

- Areas exposed to direct sunlight
- Humid or dusty areas
- Areas directly exposed to a heat outlet or heating appliance

Handling precautions:

• Do not write on the label side with a ball-point pen or other writing utensils.

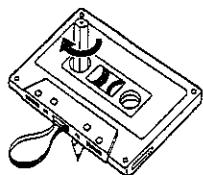
• Do not use record cleaning sprays, benzine, thinner, static electricity prevention liquids or any other solvent.

• Do not use CDs with poorly attached labels or stickers.

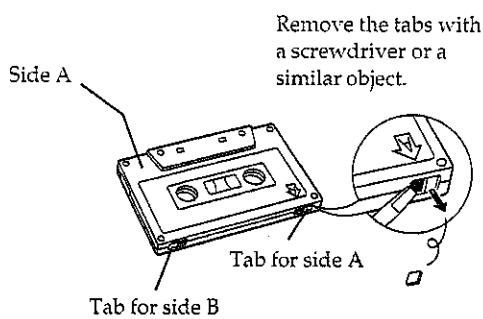
Adhesive protruding from underneath stickers or left over from peeled off stickers can cause your stereo to malfunction.

Concerning Cassette Tapes

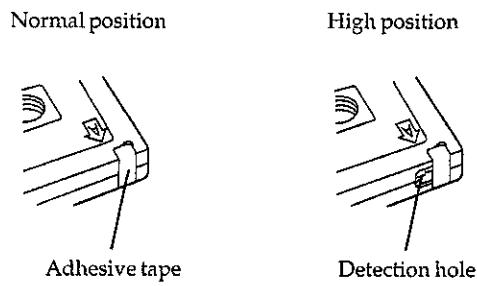
A



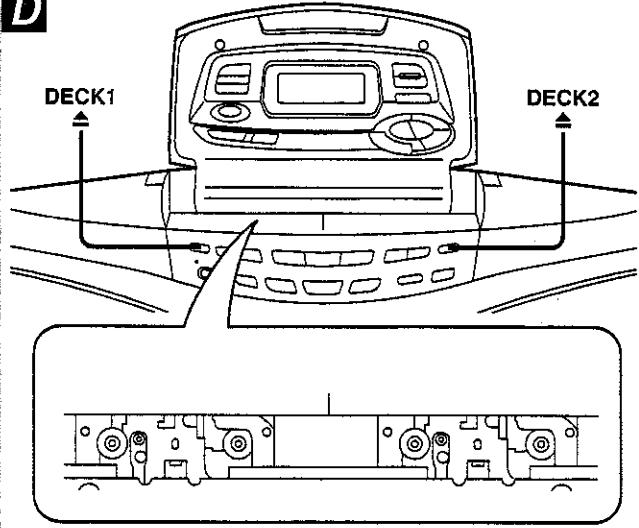
B



C



D



Selection of cassette tapes

Cassette tapes exceeding 100 minutes:

These tapes are handy for their long playback and recording time but be careful about repeatedly stopping and starting, rewinding and fast forwarding these tapes in short intervals as they are thin, tend to stretch and may become entangled in the deck mechanism.

Endless tapes:

Failure to operate these tapes correctly may cause the tape to wind around the revolving parts.
For this unit, it is recommended to use the tape which is appropriate to the auto reverse mechanism.

If the tape loosens, take up the slack □

Tape slack may cause the tape break.

To prevent erasure of recorded sounds □

To re-record on a protected cassette, cover the slot with adhesive tape. **C**

Do not cover the detection holes on high position tapes.

Improper tape storage:

You can damage tapes if you store them in the following places;

- In high temperature (35°C or higher) or high humidity (80% or higher) areas
- In a strong magnetic field (near a speaker, on top of TV, etc.)
This can erase a recording.
- Areas exposed to direct sunlight

To erase sound previously recorded on a tape:

Disconnect the microphone.

1. Load the tape in deck 2.
2. Press ■.
3. Press ●/● II REC/REC PAUSE.

Tape head care □

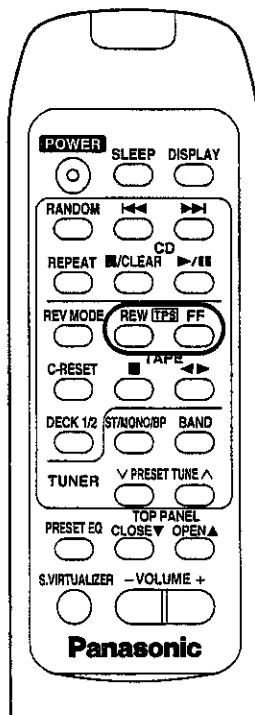
To assure sound quality for recording and playback, be sure to clean the tape heads after approximately every 10 hours of use.

1. Open the cassette cover by pressing DECK 1 ▲ and DECK 2 ▲.
2. Clean the portions which contact the tape (the shaded portions in the figure) with a cotton swab.

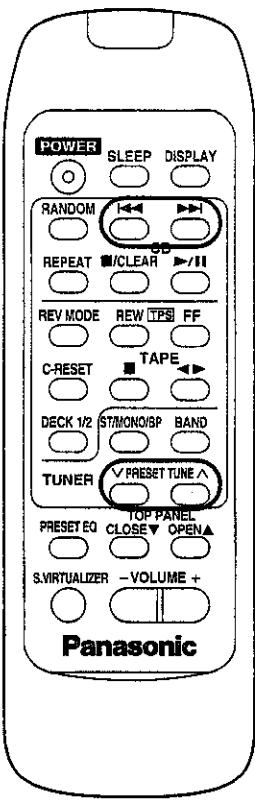
Do not use any solution other than alcohol for head cleaning.

Quick Reference of Remote Control Operations

Common operations	
Turning the unit on and off (Unit cannot be turned on by remote control when batteries are used as power source.)	
To open the top panel	
To close the top panel	
Selecting the equalizer effect	
To turn on sound-space effects	
Adjusting the volume	
Selecting the display	
One touch play	
Setting/releasing the sleep timer	



Cassette deck operations	
Starting playback/Changing the direction	
Rewinding/Fast forwarding	In the stop mode
Finding the beginning of a track (TPS)	During playback
Stopping the tape	
Selecting the reverse mode	
Resetting the tape counter to "000"	
Selecting deck 1/2	



Tuner/CD operations	
Listening to a programmed radio station	V/PRESET TUNE ▲
Selecting reception in stereo or mono	ST/MONO/BP
Reducing noise during the recording of AM (LW/MW) programs	ST/MONO/BP
Starting play / Temporarily stopping play	▶/II
Stopping play / To clear program play	■/CLEAR
To skip tracks	◀ ▶
To search forward or backward	Keep pressing ◀ ▶
Listening to track(s) repeatedly	REPEAT
Listening to track at random	RANDOM

Maintenance of external surfaces

To clean this unit, use a soft or dry cloth.

If the surfaces extremely dirty, use a soft cloth dipped in a soap and water solution or a weak detergent solution.

Wring the cloth well before wiping the unit.

Wipe once again with a soft or dry cloth.

Never use alcohol, paint thinner, benzine, or chemically treated clothes to clean this unit. Such chemicals may damage the finish of your unit.

Troubleshooting Guide

Before requesting service for this unit, check the chart below for a possible cause of the problem you are experiencing. Some simple checks or a minor adjustment on your part may eliminate the problem and restore proper operation.

If you are in doubt about some of the check points, or if the remedies indicated in the chart do not solve the problem, refer to the directory of Authorized Service Centers (enclosed with this unit) to locate a convenient service center, or consult your dealer for instructions.

Problem	Probable cause(s)	Suggested remedy	Page
Common problems			
"E" appears.	Have you made a mistake in operation?	Read the operating instructions and try again.	
"U01" appears.	The batteries are flat.	Replace them with new ones. Alternatively, use a household AC outlet as the power source.	5
	The power is not supplied to the unit.	Install the batteries or connect the power cable.	5
While listening to CDs			
Play does not start. No display of track numbers, etc.	Has the CD been installed upside down?	Install the CD with the label side facing up.	14
	Has there been a sudden change in temperature? For instance, was the unit brought straight from a cold place into a warm location?	Condensation may have formed on the lens unit. Leave it for about an hour before attempting operation again.	
Certain sections are not played properly.	Is the CD soiled?	Wipe with a soft cloth.	30
	Is the CD scratched?	Replace with a new CD.	
While listening to tapes			
No recording.	Have the tape's accidental erasure prevention tabs been broken out?	Cover the holes with adhesive tape.	31
Sound is low, intermittent, or poor quality, noisy, scratchy, or unsteady.	Are the head soiled?	Clean them.	31
While listening to the radio			
Stations cannot be tuned in well.	Has the antenna been adjusted properly?	Try changing its direction.	12
Noise heard during AM (LW/MW) reception.	Are you using a remote control of other appliances near the unit?	Use the remote control at a distance.	
	Are you operating the unit and a TV set at the same time?	Place the unit at a distance from the TV. Alternatively, turn the TV off.	
While using the timer			
No timer operation at the programmed time.	Is the unit turned on (when the play timer and the recording timer are being used)?	Turn the unit off upon completion of the settings.	24 26
	Has the programmed timer indicator (A , B , REC or SLEEP) lighted?	Operate again so that the display lights up.	24 26 28

Technical specifications

Radio

Frequency range

(United Kingdom)

FM 87.50–108.00 MHz (50 kHz steps)

LW 144–288 kHz (9 kHz steps)

MW 522–1611 kHz (9 kHz steps)

(Except United Kingdom)

FM 87.50–108.00 MHz (50 kHz steps)

AM 531–1602 kHz (9 kHz steps)

530–1600 kHz (10 kHz steps)

CD player

Sampling frequency

44.1 kHz

Decoding

16 bit linear

Beam source

Semiconductor laser (wavelength 780 nm)

No. of channels

2 channel, stereo

Wow and flutter

Less than possible measurement data

D/A converter

MASH (1 bit DAC)

Tape recorder

Track system

4 track, 2 channel, stereo

Monitor system

Variable sound monitor

Recording system

AC bias

Erasing system

AC erase

Frequency range

Normal position

30–16000 Hz

High position

30–17000 Hz

General

Speakers

10 cm 2.7Ω×2

Jacks

Output

PHONES: 3.5 mm stereo (16–32Ω)

Input

MIX MIC: 3.5 mm (200–600Ω)

Power requirement

AC

(United Kingdom, Australia and New Zealand)

230–240 V, 50 Hz

(Except United Kingdom, Australia and New Zealand)

110–127 V/200–220 V/230–250 V, 50/60 Hz

Power consumption: 44 W

Battery

15 V (Ten R20/LR20 D size, UM-1 batteries)

•Do not use rechargeable type batteries.

Memory back-up for computer/clock

6 V [Four R6/LR6 (AA, UM-3) batteries]

•Do not use rechargeable type batteries.

Dimensions (W×H×D)

630×178×296 mm

(Top panel closed)

Weight

5.6 kg

without batteries

Note

Specifications are subject to change without notice.

Weight and dimensions are approximate.

MASH is a trademark of NTT.

Matsushita Electric Industrial Co., Ltd.
Central P.O. Box 288, Osaka 530-91, Japan

RQT3628-3B
F1196Z1027 (D)